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Editorial Notes.

Is Baku Declining?

A writer in the organ of the South Russian coal industry, the *Gorno-Zavodski Listok* puts forward a number of arguments concerning the prospects of the Baku oil fields, and from these he draws conclusions, distinctly unfavourable, urging that since there is no hope of cheap liquid fuel, consumers had better make up their minds as quickly as possible to go back permanently to coal. Of course, in such a journal, one could scarcely expect the claims of oil fuel to be praised, yet it comes as a surprise to find that in order to strengthen his argument, the writer draws considerably upon his fertile imagination and ignores facts. Many things which he says we are quite ready to admit; in fact, it would be idle to deny that the production of Baku has of late shewn a diminution, and that the yield per well displays a lower average. But it would be misleading to take these facts as a conclusive sign that Baku is declining—that is, that there are now signs of exhaustion. The high prices which have ruled for crude oil in Baku during the past few years have naturally rendered the exploitation of poor wells very remunerative, and consequently we see that to-day many old wells that are being baled give a yield which if the realised prices were low, would immediately render their abandonment absolutely necessary. These naturally reduce the average yield per well, but if we would seriously ask ourselves the question whether a real exhaustion of the strata is to be shewn by statistics, then we must look at the average yield of the new wells. Statistics answer this question in the negative, for the figures of 1908 shew an improvement of 13 per cent. over the averages for the preceding year.

American Petroleum Exports during November.

Due to a very considerable extent to the position of the tank fleet, the petroleum exports from American ports during November shew a great decline as compared with the figures for the corresponding period of last year, even though, up to date, American exports for 1908 are a great advance upon those of 1907. During November the total value of the products shipped abroad, was one million dollars less than during November 1907, the value being approximately $6,700,000. The decrease recorded during the month falls upon every product—illuminating oil, lubricating oil, napthas, crudes, etc., all sharing in the general reduction. The table given upon another page of this issue, shews the shipments from the various ports, but from what we know, the apparent bulky decrease during the month may be totally ascribed to the cause already mentioned, and not to a decline in America's foreign petroleum trade, which, let us add, has been built up in the four quarters of the earth, at the expense of million of dollars, and the exercise of almost inhuman energy and devotion.

The Commonwealth Oil Corporation's Meeting.

It is at all times very dangerous for a company chairman to attempt to look into the distant future and draw conclusions therefrom, and no one to-day is more aware of this than the worthy Chairman of the Commonwealth Oil Corporation—Sir George Newnes, M.P.—who had, at Thursday's annual meeting, to explain why it was that the expectations of those in control of that great concern's management had not as yet been realised. But unlike other prophecies which we sometimes hear, those of Sir George appear to be based upon fact, and the only thing that can be said against them is that they were somewhat premature with regard to time. The hundred and one things, which all tend to delay progress, have to always be reckoned with, especially in such a gigantic concern as this, and though some of the shareholders of the Corporation may perhaps feel a trifle disappointed at the non-arrival of dividends, it does appear, all things considered, that the day is fast arriving when they will have no cause for complaint.

The Galician Position More Encouraging.

The recently formed Union of Petroleum Producers in Galicia has announced to the producers that it is now ready to receive crude oil for storage. For the present the union will only receive the current production without entering into any obligation for the future. The union further announces that it will commence making advances on crude oil stored with it on the 15th of January. The rate of advances is not announced, but it is understood that it will be 15 kronen per ton. This is considerably above the present spot price, and, if true, is bound to have an immediate effect on the crude oil market. The negotiations, which were for a long time in progress between the union and the principal pipe line companies, have now been brought to a successful finish, the pipe line companies having agreed to pump crude oil from the wells into the tanks of the union. The transportation firms which have thus joined hands with the union are:—The

Galicia Co., the Galizische Karpathen Petroleum A.G., Galizische Magazinirungs - Gesellschaft, Galizische Rohoel Transport u. Lager A.G., Petrolea Co., Prinz Thurn u. Tarische Rohoel Gesellschaft, etc. All these pipe line firms will connect their systems with the tanks of the union. As a result of all these arrangements the market is shewing signs of improvement. During the latter half of December crude oil for delivery before the end of the month was quoted 10·40—10·80 kronen per ton; end of January, 10·80—11·20 kronen; January-April, 11·60—11·90 kronen; and for delivery at the end of 1909 as much as 15 kronen per ton was asked. These prices, of course, are still far from remunerative, but they serve as an indication that an early termination of the crisis is in view.

THE TIN PLATE MARKET.

Messrs. Norton, Owen & Co., of 4, Bishopsgate Street Within, London, E.C., report under date December 31st, 1908, as follows:—

At the beginning of the year, oil sizes were 12/4½ for IC 18¾ × 14 and 17/6 for IC 20 × 10, f.o.b. Welsh ports, and at the close they stand at practically the same prices.

The decline in prices of iron and steel products, which commenced in the latter part of 1907, continued throughout the year 1908, and British steel tin plate bars, which in January last were fetching £4/17/6 to £5, have declined to £4/7/6 to £4/10/0 per ton to-day, whilst the decline in finished iron and steel products has been about 20/- to 30/- per ton, and the falling off in exports of these goods has been enormous. Severe depression has prevailed throughout the year in every branch of the iron and steel trades with one exception—the tin Plate trade, which, as we remarked in our report of July 16 last, has stood out prominently "as an oasis in the desert." The tin plate mills without exception have been fully employed throughout the year, and in many cases makers have found it difficult to keep up with the demand. Prices have been remarkably steady in the surrounding depression, the fluctuation being not more than 1/- per box. The highest point was reached in April when oil sizes were very freely sold in large quantities IC 13/- to 13/1½ for IC 18¾ × 14, and 18/- to 18/3 for IC 20 × 10 f.o.b. Wales. Since then prices have gradually declined, and an enormous business in oil sizes was done in July and October for deliveries extending into the first half of 1909, at prices ranging from 12/4½ to 12/6 for IC 18¾ × 14, and 17 4½ to 17/6 for IC 20 × 10 f.o.b. Wales. At the moment, as usual at the end of the year, there is little demand. Buyers generally appear to be "sitting on the fence" with a view to finding out which way the wind is likely to blow in the coming year. It is extremely difficult at the present moment to see what is likely to happen, as much depends upon the course of the demand, and the action of the American and German steel bar makers, but after the quarterly meeting of the iron, steel and tin plate trades at Birmingham on January 14th a clearer view may be possible

We quote oil sizes to-day:—

IC	18¾ × 14	124 sheets	110 lbs.	12/3 to 12/4½	per box.
IC	19½ × 14	120 ,,	110 ,,	12/3 ,, 12/4½	,,
IC	20 × 10	225 ,,	156 ,,	17/4½ ,, 17/6	,,

F.o.b. Wales. Tin lining and iron hooping extra.

LONDON OIL SHARE MARKET.

Friday, January 1st, 1909.

Few changes have been recorded since our last issue in Oil Shares on the London Stock Exchange, business having been practically suspended owing, in the first place, to the Christmas Holidays and, in the second, to the severe storms which swept the country and disorganised both telegraphic and postal communication, while to-day, as usual, the House is again closed for New Year's Day.

At the last settlement for the year 1908, which commenced on the 28th ult., Contango Rates ruled fairly easy, but a comparison of "making up" prices shews a number of shrinkages.

Baku Ordinary lost 3d. per share at 3d., Russian Ordinary and Preference both 6d. at 2s. 9d. and 3s. 3d., Schibaieff Ordinary 4½d. at $\frac{1}{32}$, Preference $\frac{1}{16}$ at ¼, and Shell Transport Ordinary 9d. at 47s. 6d.

On the other hand, Californian Oilfields have advanced $\frac{1}{16}$ at 5, and Spies 1½d. at 10s. 9d. No change took place in Anglo-Russians at 6d. or in Baku Preference at 9d. per share.

THE RUMOURED FIRE AT MESSRS. PEARSON'S MEXICAN REFINERY.

Founded upon a startling report which appeared in several London evening journals on Thursday evening, a rumour was very general yesterday in the City that the large oil refinery belonging to Messrs. Pearson and Son, Limited, in Mexico, was destroyed by fire, and that several Englishmen had been killed.

We are authorised to state that Messrs. Pearson totally discredit such statement, for even after the fire is supposed to have caused such havoc, they received at their head offices congratulatory New Year messages from those in charge of the company's operations in Mexico.

PRODUCTION OF ENGLISH COMPANIES IN RUSSIA.

Baku Russian Petroleum Co., Ltd.—The production for the week ended 19th December was 144,550 poods, or 2,330 tons; and for the week ended 26th December was 143,050 poods, or 2,318 tons.

Russian Petroleum and Liquid Fuel Co., Ltd.—The production for the week ended 19th December was 208,000 poods, or 3,353 tons; and for the week ended 26th December was 204,000 poods, or 3,289 tons.

Spies Petroleum Co., Ltd.—The production for the week ended 20th December was 198,020 poods, or 3,193 tons. The production for the corresponding week last year was 138,990 poods, or 2,241 tons. The output for the week ended 27th December was 185,515 poods, or 2,992 tons. The total production for the corresponding week last year was 135,355 poods, or 2,183 tons.

The European Petroleum Co., Ltd.—The production for the week ended 20th December was 144,504 poods, or 2,330 tons; and for the week ended 27th December was 146,480 poods, or 2,362 tons.

The Petroleum Trade of England during 1908.

. . A BRIEF RETROSPECT. . .

The past year can truly be said to have witnessed a significant expansion of the oil trade in this country, and though prices have not been on the whole very satisfactory, the volume of trade in the United Kingdom has increased most substantially. The twelve months have been to some extent an abnormal period, for whereas bulk freights have kept at an unprecedented figure, oil prices generally have declined. There must be many who will agree that the oil trade is becoming a far less remunerative branch of commerce each passing year. Yet where is there an important section of trade to which the same remark does not apply?

One eminently pleasing feature is that our country's trade in petroleum and its multifarious products is ever on the increase, and when it is recollected that during 1908 we imported considerably over 20,000,000 gallons more than was the case in 1907 it must be evident that the progress is even more real than is apparent at first sight. In regard to the more extended use of motor spirit the past year shews undoubted progress, and though in the case of the more general adoption of liquid fuel, our oil imports point to no increase for the twelve months. It is now a certainty that the foundations are now being carefully laid for a very important trade in this direction. Our British Admiralty has decisively cast it voice in favour of oil fuel, and this fact in itself says much for the prospects of future expansion. There has, in the past, we know, been great and almost overwhelming difficulties in the way of progress, for on the one hand we have had phenomenal bulk transport freights to pay, and on the other, the fact that no proper distributive organisation was in being to cater for the advent of the new and economic fuel. But now things have fortunately changed, and, as we pointed out in the Review a few weeks ago, depôts have been established at all great centres in the Kingdom, at which, in the future, adequate supplies will be ready for delivery to all comers. Hitherto, the liquid fuel has been of American origin, but of late a few small lots of Roumanian fuel have been imported, and in the future there is no doubt that that progressive country will, in regard to liquid fuel as to other petroleum products, play an ever increasingly important *role.*

Illuminating oil has been imported during the year just closed to the extent of nearly 170,000,000 gallons, being an advance upon the figures of 1907 by almost 20,000,000 gallons. America has strengthened her powerful hold in the United Kingdom, for we received last year over 125,000,000 gallons of illuminating oil from the States—a figure far above that of 1907—while Russian oil year by year becomes a diminishing quantity. The figures of 1907 were behind those of the preceding year, and now those for 1908 shew a decline of nearly 40 per cent. upon those of the previous twelve months, the total being only about 20,000,000 gallons or only one-sixth those of American oil.

In illuminating oil, too, Roumania, is coming to the front, and for the past year that country has supplied more than one-half the quantity imported from Russia, the total figures being a considerable advance upon what they have been hitherto.

So far as lubricating oil is concerned, the figures for 1908 are about a set-off compared with those of 1907. Approximately 46,000,000 gallons have been imported, America claiming over three quarters of this trade. There is no doubt that the coming and the growing popularity of the motor-car has done a great good to this branch of the oil trade, finding as it has done a very large outlet for a superior lubricant. Though it is impossible to obtain figures as to the value of the imported lubricating oils, it can be taken for granted that their total value was quite up to, if not above, the figure of past years. One satisfactory feature is that Russia has come forward with increasing shipments of lubricating oil during the past twelve months, for something like 6,000,000 gallons have been of Russian origin. With the improved methods for treating and preparing lubricants in the Caucasus, there is no reason to doubt that in time to come, Russia will capture a fair portion of England's lubricating trade.

The imports of solar oil continue to increase, and though the total has increased from 59,000,000 gallons to 64,000,000 gallons, that increase has mainly been brought about by the large shipments from Roumanian ports. It will come as a surprise to many to learn that to-day Roumania is supplying us with about 16 per cent. of our solar oil imports, as against her 9 per cent. for the previous twelve months.

As we have frequently prophesied, the venue of origin for the supply of our country's needs in petrol is slowly changing. American motor spirit comes into the English market in ever decreasing quantities, and during the past year, the shipments from the other side of the Atlantic were even less by 30 per cent. than they were in 1907. Out of the 40 odd million of gallons imported, America only furnished 6,000,000 gallons, or practically the same quantity as she did four years ago, when the consumption of benzine for internal combustion engines in this country was scarcely one quarter what it is now. The Dutch Indies, on the other hand, continue to be our chief source for the supply of motor spirit, and during the year they have exported to this country over 21,000,000 gallons—an amount about equal to what it was in 1907. But there are two very striking factors, which are brought to light in studying the trade in benzine, and these are the rise of both Roumania and Russia, the former country having sent us 5,000,000 gallons, and the latter over 4,000,000 gallons. The Petroles de Grosnyi (S.A.) is responsible for the introduction of the heavy Grosny spirit upon this market, while Motor Fuel, Ltd. (the marketing organisation for which is the Homelight Oil Co., Ltd.), solely import Roumanian spirit.

WEEKLY PRICES OF AMERICAN AND RUSSIAN PETROLEUM IN THE RESPECTIVE COUNTRIES DURING THE YEAR 1908.

		AMERICAN.					
		Crude. (dollars per barrel.)			Refined in New York. (cents per gallon.)		
Week ending.		Penn.	N. Lima.	S. Lima.	Bulk.	Cases.	Barrels.
January	4	1·78	0·94	0·89	5·00	10·90	8·75
	11	1·78	0·94	0·89	5·00	10 90	8·75
	18	1·78	0·94	0·89	5·00	10·90	8·75
	25	1·78	0·94	0·89	5·00	10·90	8·75
February	1	1·78	0 94	0·89	5·00	10 90	8·75
	8	1·78	0·94	0·89	5·00	10·90	8·75
	15	1·78	0·94	0·89	5·00	10·90	8·75
	22	1·78	0·94	0·89	5·00	10·90	8·75
	29	1·78	1·04	0·99	5·00	10·90	8·75
March	7	1·78	1·04	0·99	5·00	10·90	8·75
	14	1·78	1·04	0·99	5·00	10 90	8·75
	21	1·78	1·04	0·99	5 00	10·90	8·75
	28	1·78	1·04	0·99	5·00	10·90	8·75
April	4	1·78	1·04	0·99	5·00	10·90	8·75
	11	1·78	1·04	0·99	5·00	10·90	8 75
	18	1·78	1·04	0·99	5·00	10·90	8·75
	25	1·78	1·04	0·99	5 00	10·90	8·75
May	2	1·78	1·04	0 99	5·00	10·90	8·75
	9	1·78	1·04	0 99	5·00	10·90	8·75
	16	1·78	1·04	0·99	5·00	10·90	8·75
	23	1·78	1·04	0·99	5·00	10 90	8·75
	30	1·78	1·04	0·99	5·00	10·90	8·75
June	6	1·78	1·04	0·99	5·00	10·90	8·75
	13	1·78	1·04	0·99	5·00	10·90	8·75
	20	1·78	1·04	0·99	5·00	10·90	8·75
	27	1·78	1·04	0·99	5·00	10·90	8·75
July	4	1·78	1·04	0·99	5·00	10·90	8·75
	11	1·78	1·04	0·99	5·00	10·90	8·75
	18	1·78	1·04	0·99	5·00	10·90	8·75
	25	1·78	1·04	0·99	5·00	10·90	8·75
August	1	1·78	1·04	0·99	5·00	10·90	8·75
	8	1·78	1·04	0·99	5·00	10·90	8·75
	15	1·78	1·04	0·99	5·00	10·90	8·75
	22	1·78	1·04	0·99	5 00	10·90	8·75
	29	1·78	1·04	0·99	5·00	10·90	8·75
Sept.	5	1·78	1·04	0·99	5·00	10·90	8·75
	12	1·78	1·04	0·99	5·00	10·90	8·75
	19	1·78	1·04	0·99	5·00	10·90	8·50
	26	1·78	1·04	0·99	5·00	10·90	8 50
Oct.	3	1·78	1·04	0·99	5·00	10·90	8·50
	10	1·78	1·04	0·99	5·00	10·90	8·50
	17	1·78	1·04	0·99	5·00	10·90	8·50
	24	1·78	1·04	0·99	5·00	10·90	8·50
	31	1·78	1 04	0·99	5·00	10·90	8·50
Nov.	7	1·78	1·04	0 99	5·00	10·90	8·50
	14	1·78	1·04	0·99	5·00	10 90	8·50
	21	1·78	1·04	0·99	5·00	10·90	8·50
	28	1·78	1·04	0·99	5·00	10·90	8·50
Dec.	5	1·78	1·04	0·99	5·00	10·90	8·50
	12	1·78	1·04	0·99	5·00	10·90	8·50
	19	1·78	1·04	0·99	5·00	10·90	8·50
	26	1·78	1·04	0·99	5·00	10·90	8·50

		RUSSIAN.			
		Refined.			
		For Export.	For Inland.	Crude.	Residuals.
		Copecs per Pood.			
January	6	34	33	25¼	25½
	13	—	—	25¼	—
	20	32½	32½	25¼-25¾	25¾
	27	—	—	26	26
February	3	—	32½	26	26
	10	—	32½	26½	27
	17	—	32½	26½ 27	27
	24	32½	32½	27¼	27½
March	2	—	32½	27⅜	28
	9	—	32½	27½	28
	16	32½	32½	27⅛-27⅞	28½
	23	—	32½	27	27½
	30	30	32½	26½-27	26½
April	6	—	30	26	—
	13	29	29½	24¾-25¼	25¾
	20	—	29	23	24
	27	—	28	19½ 19⅞	23
May	4	28¼	28	20	23½
	11	—	28	22-22½	24
	18	—	29	22½	—
	25	28	30	22½	23½
June	1	—	30	22½	23½
	8	—	30	22¼-22¾	23½
	15	—	28	21	—
	22	—	27	19½-20	21-21½
	29	—	—	19½-20	—
July	6	—	—	19½-19¾	20
	13	—	26	10	20½
	20	25½	25	20⅛	20½
	27	25½	25	20	20½
August	3	25½	25	19	20⅛
	10	—	—	19	20½
	17	—	24 24½	19	20⅝ 21
	24	24¾	24 24½	19½	20⅝-21
	31	—	24-24½	19½ 20	20⅝ 21
Sept.	7	—	—	20	—
	14	26½	—	20½	21
	21	—	—	20½	21
	28	27	26	20¾	21
October	5	—	—	20	21
	12	20	—	20	21
	19	—	—	20	20½
	26	25¾	25½	19-19½	20
Nov.	2	—	—	19	20
	9	25¼	25¼	19	20
	16	25½	25¼	19¼	20
	23	25½	25¼	19½-19¾	20
	30	25½	25½	19½	—
December	7	25½	25½	19¼	19½
	14	25½	25¼	19¼	19½
	21	—	—	18¾ 18⅞	19¾
	28	—	—	—	—

PRICES OF AMERICAN, RUSSIAN AND ROUMANIAN REFINED OIL ON THE LONDON MARKET DURING THE YEAR 1908.

			AMERICAN.	RUSSIAN.	ROUMANIAN.
January	3	..	7⅛	6⅜	6¾
	10	..	7⅛	6⅜	6¾
	17	..	7⅛	6⅜	6¾
	24	..	7⅛	6⅜	6¾
	31	..	6¾-6⅞	6⅛-6¼	6¾
February	7	..	6¾ 6⅞	6⅛-6¼	6¾
	14	..	6¾-6⅞	6⅛-6¼	6¾
	21	..	6½-6⅝	5⅞-6	6¾
	28	..	6½-6⅝	5⅞-5	6¾
March	6	..	6½-6⅝	5⅞-6	6¾
	13	..	6½-6⅝	5⅞-6	6¾
	20	..	6½-6⅝	5⅞-6	6¾
	27	..	6½-6⅝	5⅞-6	6¾
April	3	..	6½-6⅝	5⅞-6	6¾
	10	..	6½-6⅝	5⅞-6	6¾
	17	..	6½-6⅝	5⅞-6	6¾
	24	..	6½-6⅝	5⅞-6	6¾
May	1	..	6½-6⅝	5⅞-6	6¾
	8	..	6½-6⅝	5⅞-6	6¾
	15	..	6½-6⅝	5⅞-6	6¾
	22	..	6½-6⅝	5⅞-6	6¾
	29	.	5½-6⅝	5⅞-6	6¾
June	5	..	6½-6⅝	5⅞-6	6¾
	12	..	6½-6⅝	5⅞-6	6¾
	19	..	6½-6⅝	5⅞-6	6¾
	26	..	6½-6⅝	5⅞-6	6¾
July	3	..	6½-6⅝	5⅞-6	6¾
	10	..	6½-6⅝	5⅞-6	6¾
	17	..	6½-6⅝	5⅞-6	6¾
	24	..	6½-6⅝	5⅞-6	6¾
	31	..	6½-6⅝	5⅞-6	6¾
August	7	..	6½-6⅝	5⅞-6	6¾
	14	..	6⅜-6½	5⅞-6	6¾
	21	..	6½-6⅝	6 -6⅛	6⅞
	28	..	6½ 6⅝	6 -6⅛	6⅞
Sept.	4	..	6¾-6⅞	6½ 6⅜	6⅞
	11	..	6¾-6⅞	6½-6⅜	6⅞
	18	..	6¾-6⅞	6½-6⅜	6⅞
	25	..	6¾-6⅞	6½-6⅜	6⅞
October	2	..	6¾-6⅞	6½-6⅜	6⅞
	9	.	6¾-6⅞	6½-6⅜	6⅞
	16	..	6¾-6⅞	6½-6⅜	6⅞
	23	..	6¾-6⅞	6½-6⅜	6⅞
	30	..	6¾-6⅞	6½-6⅜	6⅞
Nov.	6	..	7 -7⅛	6½ 6⅝	7⅛
	13	..	7 -7⅛	6½-6⅝	7⅛
	20	..	7 -7⅛	6½-6⅝	7⅛
	27	..	7 -7⅛	6½ 6⅝	7⅛
Dec.	4	..	7 -7⅛	6½-6⅝	7⅛
	11	..	7 -7⅛	6½-6⅝	7⅛
	18	..	7 -7⅛	6½-6⅝	7⅛
	25	..	7 7⅛	6½-6⅝	7⅛

THE OIL TANKER TRADE DURING 1908.

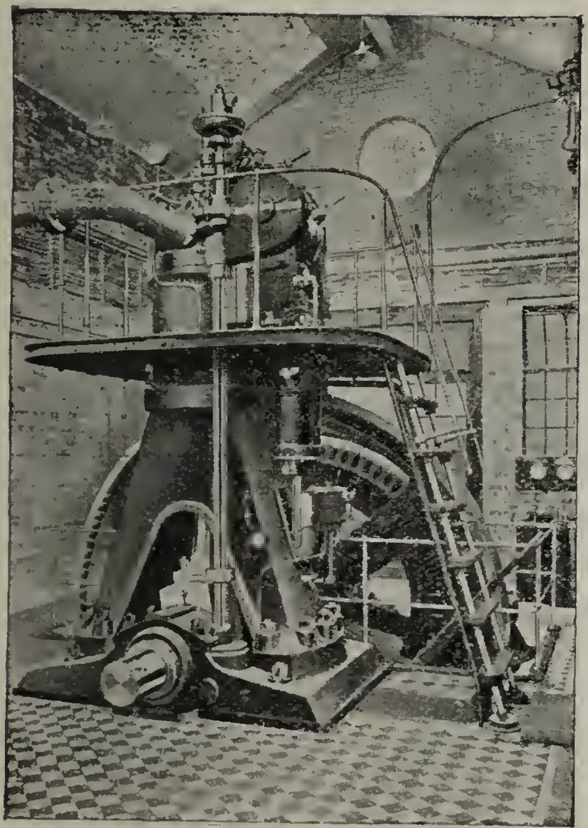
A RECORD YEAR.

The past year will always be classed as having been the most eventful associated with the history of oil tankers. It was eventful in more ways than one, for whilst the shipbuilding yards were continuously busy in building new oil tankers, the world's fleet was considerably weakened by oil tanker disasters at sea, several vessels having been completely wrecked.

In all, no less than twenty-four new tankers have been launched from English shipbuilding yards during the twelve months, the launch of the last tanker—one, by-the-bye, for the Anglo-Saxon Petroleum Co., Ltd.—having taken place during Christmas week, a report of the ceremony appearing elsewhere in this week's REVIEW. At present there are about a dozen new tankers being built, and all these are expected to be launched before next June. The largest steamer launched during the past twelve months has been the "Hesperus" for the German American Co., and this company has now another equally large tanker on the ways. The new tonnage, after taking into consideration the various losses of the year, will approximate 100,000, a fact which in itself speaks volumes for the rapidity with which the ocean bulk oil trade is expanding. There is no doubt that the abnormal freights which have been ruling for the past couple of years were, in a way, responsible for the building of several of these new tankers, and as was only to be expected, since the majority of the new vessels have been in service, freights have gradually regained their old level, having fallen to a very appreciable extent during the year.

The oil tankers which have been launched from English and Scotch shipbuilding yards during the year are given in the following table, together with the names of the owners and their respective bulk oil carrying capacity:—

	Owners.	Capacity in tons.	Builders.
"Hermione"	Messrs. C. T. Bowring and Co.	6,700	Messrs. Swan and Hunter, Wallsend.
"Buyo Maru"	Toyo Kisen	6,800	Messrs. Armstrong, Whitworth and Co.
"Soyo Maru"	,,	6,800	,, ,, ,,
"Joyo Maru"	,,	7,000	,, ,, ,,
"Carpathian"	Messrs. Lane and Macandrew	6,500	,, ,, ,,
"Oberon"	Messrs. C. T. Bowring and Co.	6,700	,, ,, ,,
"Roumanian"	Messrs. Lane and Macandrew	6,500	,, ,, ,,
"Servian"	,, ,,	6,500	Messrs. Laing and Sons.
"Derbent"	S.A.I.C., Antwerp	4,500	Messrs. Armstrong, Whitworth and Co.
"Petroleine"	Saxoleine Steamship Co.	5,800	Tyne Iron Co.
"Lutetian"	Messrs. Lane and Macandrew	6,000	Messrs. Laing and Sons.
"Purelight"	Pure Oil Co.	6,500	Greenock Dockyard Co.
"Oneida"	Anglo-American Oil Co.	700	,, ,, ,,
"Tamarac"	,, ,,	6,000	Messrs. Napier and Miller.
"Saranac"	,, ,,	6,000	Messrs. W. Gray and Co.
"Hyrcania"	Caspian Oil Co.	7,000	Messrs. Armstrong, Whitworth and Co.
"Paul Paix"	Lennards Carrying Co.	6,000	Messrs. Craggs and Sons.
"Cheyenne"	Anglo-American Oil Co.	6,500	Messrs. Swan and Hunter.
"Lucigen"	Messrs H. E. Moss	6,500	Messrs. Armstrong, Whitworth and Co.
"El Lobo"	Lobitos Oilfields Co., Ltd.	6,000	,, ,, ,,
"Hesperus"	Deutsche Amerikansche A.G.	8,500	Messrs Palmers Shipbuilding Co.
"Cadillac"	Anglo-American Oil Co.	6,000	Messrs. Napier and Miller.
"Clearfield"	Messrs. Hunting and Son	5,700	Tyne Iron Co.
"Conch"	Anglo-Saxon Petroleum Co.	6,500	Messrs. Swan and Hunter.



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AN ANALYSIS OF ANAPA CRUDE OIL.

Mr. K. Kharitchkoff, the well-known authority on the chemistry of Russian petroleum, publishes in the latest issue of the *Neftiannoie Dielo* the results of his analysis of a sample of crude oil taken from wells in the locality of Suvorovo-Tcherkesskaia in the Anapa district. The samples were supplied by Mr. Youshkm, the well-known mining engineer. The oil in question is a heavy crude oil with a specific gravity of 0·890, for which reason it is with difficulty freed from water at ordinary temperature. The oil was found to contain 2 per cent. of water. The distillation test yielded the following results:—

Boiling Point.				
Up to 100° C.	8·66%	of a spec. grav. of		0·6958
100 to 150° C.	17·33%	,,	,,	0·7745
150 to 270° C.	19·33%	,,	,,	0·8652
Residue above 270° C...	54·66%	,,	,,	0·968

The residue had a flash-point of 140° C. It is a thick pitch, similar to goodron, scarcely fluid at ordinary temperature. Such residuals, of course, cannot be used as fuel, but can find a profitable use for making asphalt.

Mr. Kharitchkoff has, on a former occasion, analysed some light crude oil found in the same locality, and he points out as a characteristic feature of all Anapa crude oils, both light and heavy, the comparatively high specific gravity of the kerosene fractions and residuals. The third fraction of the heavy crude oil, which really corresponds to the illuminating oil fraction, and which has a specific gravity of 0·8562, can be satisfactorily refined with chemicals, and thus transformed into a good astraline (heavy kerosene), for which purpose this fraction is eminently suitable. Of a kerosene of the normal export grade only about 10 per cent. could be obtained, not counting a small quantity (about 6 per cent. of the crude) of a Meteor kerosene which can be obtained by a redistillation of the second fraction. In such case if the output of kerosene will be reduced in favour of the residuals, the latter will have a lower gravity and greater fluidity. In this way it would be possible to obtain from the oil of this locality two qualities of kerosene and residuals of a satisfactory quality. The light benzine obtained from the first fractions to the extent of 8½ per cent. in quality and specific gravity resembles Grosny benzine.

Generally the light Anapa crude oil, in the event of its being obtained in sufficient quantity, may prove a very suitable material for benzine manufacture. This crude oil does not contain any appreciable quantity of paraffin scale.

◆

GROSNY PRODUCTION DURING SEPTEMBER.

The total production of crude oil at the Grosny oil fields, in September, amounted to 5,540,142 poods, of which 2,330,645 poods represents the yield of spouters.

The production of the various firms operating in Grosny in September was as under:—

	Production. Poods.	Number of Producing Wells.
Akhverdoff Co.	3,983,800	51
Spies Petroleum Co., Ltd. ..	1,731,655	44
Executors of Maximoff	846,400	4
Kasbeck Syndicate, Ltd... ..	521,920	13
Anglo-Russian Maximoff Co., Ltd.	300,000	14
North Caucasian Oilfields, Ltd...	134,500	9
Russian Standard	105,225	13
Moscow Naphtha Co.	91,340	7
Tcheleken-Daghestan Co. ..	76,900	14
MacGarvey..	32,547	1
St. Petersburg Co.	24,000	9
Caspian and Black Sea Society ..	21,500	2
Kholodovsky	1,000	1

The production by spouters was obtained by the following firms:—

	Poods.
Akhverdoff Co.	1,340,000
Spies Petroleum Co., Ltd.	603,265
Executors of Maximoff	200,000
Kasbeck Syndicate	137,200
North Caucasian Oilfields, Ltd.	26,200
Moscow Naphtha Co.	23,980

The number of wells in which drilling was in progress in September was 46, and in these 5,719 feet were traversed. The amount of drilling work done by the leading firms is shewn below:—

	Number of Wells in Drilling.	Number of Feet Drilled.
Akhverdoff Co.	7	777
Spies Petroleum Co., Ltd.	12	1,708
Executors of Maximoff..	7	833
Kasbeck Syndicate, Ltd.	5	546
North Caucasian Oilfields, Ltd. ..	4	553
Tcheleken-Daghestan Co.	4	630

The Anglo-Russian Maximoff Co., Ltd., is not doing any drilling at all.

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THE LAUNCH OF THE "CONCH."

Important Speech by Sir Marcus Samuel.

On Wednesday week there was launched from the Wallsend Shipyard of Messrs. Swan, Hunter and Wigham Richardson, an oil tanker, built to the order of the Anglo-Saxon Petroleum Co., London. The vessel, a screw steamer, is 412 feet in length, and 51 feet in depth. She is built for the carriage of petroleum in bulk, and will carry about 6,450 tons of oil and 1,200 tons of bunkers on a moderate draught, and will take the highest class at Lloyd's. The propelling machinery is being built by the Wallsend Slipway and Engineering Co. There was a large attendance at the launch, which was quite successful, the christening ceremony being performed by Lady Samuel. The new vessel was named the "Conch."

A luncheon was served in the mould loft after the launch, Dr. G. B. Hunter presiding. After the loyal toast, the Lord Mayor of Newcastle (Ald. J. J. Forster) proposed the health of Lady Samuel, and thanked her for performing the christening ceremony. He referred to Sir Marcus Samuel as the gentleman responsible for the Port of London Bill, which awaited the Royal assent.

The Chairman, thereupon, presented Lady Samuel with a silver inkstand as a souvenir of the occasion.

Sir Marcus Samuel, in reply, said this was about the twentieth vessel to which Lady Samuel had given "her lucky touch." He said he could only claim credit for the authorship of the Port of London Bill, but if the late Government had taken the steps the present Government had done and had had a gentleman like Mr. Lloyd-George at the Board of Trade, that Bill would have become law three or four years ago.

The chairman wished success to the "Conch," and the best wishes to the chairman of the Anglo-Saxon Petroleum Co. After describing the new vessel, he said that fortunately for the Wallsend firm and for the workmen of Wallsend they had quite a large number of petroleum tank steamers on hand. They had in addition for Sir Marcus Samuel's company another vessel on the stocks to be called the "Patella," which would be launched early in the new year. They had a steamer shortly to be launched for Messrs. Lane and Macandrew, who were also well known in the petroleum trade; and they had a further steamer to be launched later on for Sir Weetman Pearson and Co. for their Mexican trade, and another for an American company whose headquarters were at Philadelphia. During that week they had sent two tank steamers named the "Trinculo" and the "Cheyenne" to sea for another great company who owned a large number of tank steamers. Proceeding, the chairman paid a tribute to the ability of Sir Marcus Samuel in the great oil industry, and wished the company success.

Sir Marcus Samuel, in his reply, explained that for all practical purposes he had retired from any active part in the company with which he was connected, but he hoped to bear his share in an advisory capacity to the great companies which he did so much to create. Referring to vessels built at Wallsend, he mentioned the "America-Maru," built for the Japanese, and said he regretted to say that neither in that yard nor in any other British yard were they likely to see any large number of Japanese steamers built. Whether that be wise or not probably depended upon the point of view of those who were free traders or those who, like himself, believed in reciprocity. Certain it was the Japanese had taken a very definite line in deciding to do nothing for the future but construct their own vessels. That hit us rather hard, because the Japanese not only constructed their own vessels, but they would subsidise even in such trades as the petroleum trade, in which the Government had no interest whatever, but they were bent upon developing their business in every way they could and finding work for their own people at home, and they had chosen that way of doing it. Now it would interest them to know that the vessel which they had seen launched that day, and which was called the "Conch," took her name appropriately from conchology. That was to say she was one of a very large fleet named after shells. And although it might be thought in a vessel of this kind that there was no particular interest, because she was not by any means the largest boat launched, yet when he told them her mission and explained the part she had to play in the comfort and happiness of the world at large, they would agree with him that this was an occasion worthy of the great hospitality that had been extended.

He did not think that the age of romance in business was dead. Hidden in the bosom of the earth thousands and thousands of miles away, in a place where the foot of man never trod, hidden thousands of feet below the surface, there was reposing these millions of tons of petroleum which was now used in 154,000 motor vehicles in the United Kingdom. It was not too much to say that without the development of these fields the motoring industry would have been quite impossible. The sale of Shell spirit during the last year had increased by 60 per cent. This was a very important matter, because petrol to-day was not only used in motor cars, but in aeroplanes, and he was quite convinced that its use was absolutely in its infancy, and that they should see enormous applications of the motor to trade purposes. It would be a great mistake to suppose that the motor car was at present simply a rich man's toy. After referring to the way in which motor omnibuses had relieved the congested districts of London, he spoke of the company's competition in the market.

He saw in that morning's papers a matter that might give them some misgiving, and that was that a commission had been appointed to inquire into the methods of storage of petrol in England and to advise that means, if any, might be enacted to counteract it. What they were suffering from was not want of legislation, but over-legislation, and he should deplore if the result of that Commission should be to add to the disabilities of the distribution of petrol which were already sufficient, and he should like to say if the Government did wish to take any legislative steps he earnestly hoped they would investigate the condition of things on the Continent and not wait, as they had done with Old Age Pensions, to discover that there were better methods. He was certain that the Government would find that whereas they put many and needless restrictions on the distribution of petrol which added to the cost to the consumer, the German Government were extremely liberal in the views they took, and it could not be too widely known that there was no such thing as spontaneons combustion in petrol, a stupid popular fallacy which existed, and that it was absolutely impossible to cause an explosion without the application of a live light. Once that was known they had nothing to fear from a departmental inquiry. He referred to Sir Edward Grey, and said he was hopelessly trammelled by the policy pursued in France in the oil industry, and remarked that the Indian Office were taking the matter up and had made strong representations to the French Government as to the grave wrong they were doing in admitting petrol from Roumania, Russia, and the United States under one tariff, and placing that from British India under an absolutely prohibitive tariff.

Anybody would think that in the policy they were adopting in England they were living in a little world by themselves, and that they could afford to utterly ignore what the whole of the rest of the world were doing, and be a law to themselves. The subject he had in mind was the Coal Mines (Eight Hours) Bill. Already Cardiff coal was ceasing to be a practical factor in navigation. It was being rapidly driven to extinction by the production of coal in various parts of the world, and even in the last two days the British public had been good enough to subscribe two millions more to Manchurian railways; and the promoters avowedly told them it was to increase the production of coal there to 4,000 tons a day. That was very good, but it was not quite business, and he could tell them that whereas at one time such a vessel as the "Conch" would have come through the Suez Canal with her oil and taken Cardiff coal home at Aden and Port Said, the conditions were now so changed, and coal was produced so cheaply at the Cape, that it paid better to come home by the Cape. That was a process going on all over the world, and yet this nation was following the suicidal policy of decreasing the production of coal and increasing the price.

The toast of the builders was then given, and the proceedings terminated.

BAKU PRODUCTION DURING NOVEMBER.

The total production of crude oil at the Baku oil fields during the month of November (o.s.) amounted to 38,496,000 poods.

The production of the leading firms operating in the Baku oil fields in November was :—

	Poods.
Nobel Bros.	5,200,000
Caspian and Black Sea Society	2,700,000
Caspian Society	2,100,000
Baku Naphtha Co.	2,000,000
Mantascheff and Co.	2,000,000
Mirzoeff Bros.	1,300,000
Assadulaeff	1,200,000
Pitoeff and Co.	1,100,000
Moscow-Caucasian Co.	900,000
Bibi-Eybat Petroleum Co., Ltd.	800,000
Russian Naphtha Co.	800,000
Aramazd Co.	800,000
Zoubaloff	800,000
Nagieff	800,000
Russian Petroleum and Liquid Fuel Co., Ltd.	800,000
Neft Co.	800,000
European Petroleum Co., Ltd.	600,000
Schibaieff Petroleum Co., Ltd.	600,000
Melikoff and Co.	600,000
Kavkaz Co.	600,000
Naftalan Co.	600,000
Baku Russian Petroleum Co., Ltd.	600,000
Shikhovo Co.	500,000
Ter-Akopoff Co.	500,000

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OPERATIONS OF THE ANGLO-RUSSIAN COMPANIES DURING 1908.

In the next few issues of the Review we hope to give brief accounts of the operations of the several Anglo-Russian petroleum companies during 1908. In many cases, shareholders have hitherto had to wait quite twelve months before any authentic account reached them, and thus our carefully compiled articles will be of considerable interest to a large circle of subscribers.

Below we give a few details of the Spies and the European Petroleum Companies, while in our next issue we hope to give detailed accounts of the operations of the Baku Russian and the Russian Petroleum and Liquid Fuel Companies. In view of the ignominious plight into which these two latter-mentioned companies have landed themselves, the article which will appear in the Review of January 13th, will be both interesting and instructive.

THE EUROPEAN PETROLEUM COMPANY.

The conditions at Baku as far as the European Petroleum Co. is concerned, have been a little better during 1908 than in the two or three preceding years. Four new wells were commenced and eleven new wells completed during the year. The production shews a small increase, the gross amount being 7,170,000 poods for 1908, as against 7,085,750 poods for 1907. The company have been boring on a plot they recently acquired in Zabrat (No. 94), and at 183 sagens encountered oil and strong gases. Should the plot prove productive it may be a valuable addition to the oil lands held by the company.

The company's steamers have made good profits during the year, but it is feared that the period of high freights is now ended for the time being. The Galician properties have been abandoned, the company thinking this to be more economical than working them, as both the production and prospects were very poor.

THE SPIES PETROLEUM COMPANY, LIMITED.

This company and its shareholders will be able to look back upon 1908 as a year whose rosy prospects were more than fulfilled. Twelve months ago its shares stood at from 6s. 6d. to 7s. upon the London market for 10s. stock, but now they command over 11s., a fact which tells its own tale. The company's production has made a very significant step forward, owing to the bringing in their Nos. 5 and 7 wells on the Baskakoff plot. The company had been very actively engaged in drilling during 1907, and it was the results from this wise policy which have so considerably tended to improve the company's position during 1908. The total production for for the year may be taken approximately at 12,000,000 poods, as against 7,000,000 poods for the whole of 1907, while the average price realised this last year has been a trifle over 20 copecs per pood. Thus it will be seen that the Spies Co. to-day stands in a very favourable position. The policy laid down by the board, under the direction of Mr. J. Annan Bryce, M.P., has borne exceptionally good fruit this last year, yet a continuance of similar activity may bring about results even more favourable. No less than 13 additional plots have been acquired by the company in the Grosny field during the year, and these are to be developed at no distant date. When conditions are favourable it is expected that this company will make a new issue of stock.

(To be continued.)

AMERICAN PETROLEUM EXPORTS.

STATISTICS FOR NOVEMBER.

According to the official publication of the Washington Bureau of Statistics, the exports of petroleum from America from the various ports during November were as under:—

	1907. Quantities. Gallons.	1908. Quantities. Gallons.
Crude—		
Baltimore	—	—
Boston and Charlestown	—	—
Delaware	—	—
New York	—	1,263,547
Philadelphia	6,608,207	1,693,792
Galveston and Sabine	—	2,391,096
Totals	6,608,207	5,348,435
Total value for the month, 1907		$405,250
,, ,, ,, 1908		$251,461
Naphthas—		
Baltimore	405	1,000
Boston and Charlestown	—	200
Delaware	—	—
New York	2,687,453	807,111
Philadelphia	259,348	1,334,224
Galveston	—	—
Totals	2,947,296	2,142,535
Total value for the month, 1907		$287,479
,, ,, ,, 1908		$243,474
Illuminating—		
Baltimore	1,583,588	735,204
Boston and Charlestown	61,761	2,835
Delaware	—	—
New York	45,053,923	32,324,931
Philadelphia	26,722,041	29,886,402
Galveston	3,811,015	4,311,752
Totals	77,232,328	67,261,124
Total value for the month, 1907		$5,084,891
,, ,, ,, 1908		$4,500,394
Lubricating—		
Baltimore	337,250	432,300
Boston and Charlestown	25,120	11,391
Delaware	—	—
New York	8,739,441	6,405,615
Philadelphia	5,138,295	6,613,453
Galveston	3,150	4,918
Totals	14,243,256	13,467,677
Total value for the month, 1907		$1,710,698
,, ,, ,, 1908		$1,641,893
Residuum—		
Baltimore	—	455,368
Boston and Charlestown	222,000	243,710
Delaware	—	—
New York	1,725,000	1,500
Philadelphia	3,471,428	2,198,490
Galveston	3,336,001	18,480
Totals	8,754,429	2,917,548
Total value for the month, 1907		$306,013
,, ,, ,, 1908		$104,579
Total Mineral Oils—		
Baltimore	1,921,333	1,623,872
Boston and Charlestown	308,881	258,136
Delaware	—	—
New York	58,205,817	40,802,704
Philadelphia	42,199,319	41,726,361
Galveston	7,150,166	6,726,246
Totals	109,785,516	91,137,319
Total value for the month, 1907		$7,794,331
,, ,, ,, 1908		$6,741,801

TEMPORARY ADDRESS.

J. C. GOODALL,
24, Forest Road,
Kew Gardens, S.W.

Late Manager, London Branch, Homelight Oil Co., Ltd.

P.O. Tel. 1272 Richmond.

DETAILS CONCERNING CALIFORNIA'S RIFLED PIPE LINE.

The most remarkable pipe line in the world, a line of 8-inch pipe 282 miles long, has recently been completed in the California oil fields. It runs from Oil City, in the famous Coalinga country, to the seaboard near Port Costa.

In this immense tube, with pumping stations 24 miles apart, a complete inner tube of water, keeps the heavy crude oil from the steel pipe. The well-known antipathy of oil and water keeps the carried fluid and the carrier apart, but until the autumn of last year, this comparatively simple principle had not been brought into use and the problem of the transportation of heavy crude oil was the greatest the producers of the west coast had to face.

This great obstacle has been removed, and the engines on the Southern Pacific and the furnaces of the steamers which are plying on the Pacific, will be fed from this line, by which 17,000 to 20,000 barrels of thick fuel oil can be moved over one of the 24 mile sections every 24 hours.

The pipe line is the invention of Mr. J. D. Isaacs, consulting engineer of the Southern Pacific Co., and Buckner Speed, is first rifled. These rifles, or corrugations, are about one-eighth of an inch in depth, and make one complete revolution of the pipe line in every 10 lineal feet.

Instead of heating the oil to make it travel the more easily through the pipe, as has been the custom on the California lines, the heavy black fluid in this case is shot into the pipe cold, with a 10 per cent. addition of water.

The centrifugal force given to the whole mass by the rifling of the pipe, throws the water to the outside, forming a perfect sheath, or coating, in which the oil travels completely separated from the guardian water. This film between the oil and the pipe naturally reduces the friction to a great degree, as well as carrying along the oil at a greater speed than thinner oil of higher gravity, which is much easier to move, has ever been carried before.

◆

THE GROSNY PETROLEUM INDUSTRY.

The total production of crude oil at the Grosny oil fields during the first ten months of 1908 amounted to 44,173,728 poods, of which 13,000,505 poods were obtained from spouters and 31,173,223 poods by baling. In October the production was 4,817,355 poods, as against 5,540,142 poods in September. The decline is due to the reduced activity of spouters, which in October yielded 1,394,430 poods, as against 2,330,645 poods in September; the production by baling, on the other hand, shews an increase by more than 200,000 poods.

The results of operations in Grosny continue to improve, both in regard to production and prospecting for new territory. Spouters have in 1908 played a remarkable part in the Grosny petroleum industry.

All the Grosny refineries are working to their full capacity with the exception of the "Nadejda" refinery, which is still idle. The general position of the industry must be considered as highly satisfactory.

PETROLEUM IMPORTS INTO THE UNITED KINGDOM DURING DECEMBER.

THE SHIPMENTS INTO VARIOUS PORTS.

Port.	Illuminating.	Lubricating.	Residuals.	Gas Oil. (Solar.)	Benzine.	Fuel Oil.	Other Descriptions.
Aberdeen	8,000	270	—	—	—	—	—
Barrow...	1,646,350	—	—	—	—	—	—
Belfast	—	1,260	—	—	—	—	—
Bristol	2,464,320	124,020	380	742,040	—	1,267,000	—
Cardiff	—	1,400	—	—	—	—	—
Cork	—	140	—	—	—	—	—
Dublin	637,500	—	—	955,400	—	—	—
Dundee	480	—	—	—	—	—	—
Glasgow	—	197,500	3,700	—	—	—	14,510
Goole	—	1,050	—	—	—	—	—
Grangemouth	380,140	5,150	—	—	—	—	175,400
Grimsby	—	3,200	—	—	—	—	—
Harwich	—	340	—	—	—	—	—
Hull	1,043,010	206,680	—	—	1,800	—	84,030
Leith	76,310	64,440	—	—	—	—	—
Liverpool	406,920	855,440	86,160	—	37,000	—	32,070
London	4,977,050	1,286,020	18,420	724,280	1,026,020	—	1,640
Manchester	3,012,440	1,391,790	—	—	—	—	8,410
Middlesboro'	—	1,560	—	—	—	—	—
Newcastle	1,200	14,200	—	—	—	—	—
Newport	—	70	—	—	—	—	—
Plymouth	—	300	—	—	—	—	—
Southampton	336,000	22,030	—	—	—	—	—
Sunderland	1,776,000	—	—	—	—	—	—
Swansea	—	5,050	—	—	—	—	—
Totals	16,765,720	4,181,910	108,660	2,421,720	1,064,820	1,267,000	316,060

NOTES FROM THE PRINCIPAL FIELDS.

RUSSIA.

A Suggested New Organisation.—It is reported from Baku that a project is being discussed there, having as its object the creation by all the producers and refiners of a joint organisation for the sale of petroleum products in Russia. The success of these negotiations is very doubtful owing to the opposition of the Nobel and the Rothschild concerns.

Extensive Deposits in Central Asia.—Rich deposits of petroleum are reported to have been discovered near Semipalatinsk in Russian Central Asia. This find, if true, would be of great importance, as the steamship owners on the Irtysh have for some time evinced a desire to adopt liquid fuel in consequence of the growing difficulty of getting wood fuel.

The Interior Trade.—Nobel Bros. apparently wishing to get rid of their old tank fleet on the Volga, and build a new one, have offered to a group of shipowners the contract to carry all the oils which the firm will ship to the interior for the next five years at current rates, on the condition that these shipowners shall purchase the tank fleet. The offer has been accepted, so that the Nobel contract, which is an important item in the Volga carrying business, is now for five years taken off the market.

Batoum Shipments.—The following were the shipments of petroleum products from Batoum during the week ended November 29th (o.s.) :—

	Illuminating Oil.		Other Products.	
	1907.	1908.	1907.	1908.
To Europe ..	674,000	359,000	86,000	362,000
To the East ..	94,000	—	1,000	—
To Russian Ports	113,000	168,000	—	5,000
From 1st Jan. to 29th Nov. :—				
To Europe ..	13,801,000	14,826,000	9,087,000	8,919,000
,, the East ..	11,254,000	8,844,000	346,000	67,000
,, Russian Ports.	2,021,000	3,044,000	191,000	126,000

The shipments of residuals to Europe during the week ended 29th November (o.s.) amounted to 37,000 poods in 1908; and from January 1st to November 29th, 185,000 poods in 1907, and 2,056,000 poods in 1908.

AMERICA.

Illinois Production.—It is estimated that the production of the Illinois fields during 1908 reached 32,000,000 barrels, or approximately 8,000,000 barrels in excess of the figures for 1907.

The Mexican Petroleum Company, Limited.—This company is now arranging to construct a pipe line from its concessions in the Ebano field to Tampico. The survey has already been made, and the construction will commence without delay. The line will be over 500 miles long, and will possess unusual features, inasmuch as it will have to ascend an altitude of over 8,000 feet, which will necessitate numerous pumping stations at short intervals along the route.

Mid-Continent Stocks.—It is estimated that at the present time there are 50,000,000 barrels of crude oil in storage in the Mid-Continent field, and considerable congestion has been consequently caused.

The Spindle Top Field.—A well was brought in on the famous Spindle Top heights a week or two ago which shewed up as the old gushers used to several years ago. When brought in the oil spouted over the top of the derrick, but eventually the well settled down to production of about 300 barrels per day.

Is it a New Oil Field?—It is expected that a new productive oil field will be developed in the southern portion of San Joaquin county, California. Several rigs are now sinking wells. A third stratum of sand is being bored through by the pioneer company at work there, and this is below 1,500 ft. depth. Some oil was met at 1,200 ft. and the new wells will be sunk to the depth of those in Kern and Coalinga districts. The new field is within easy reach of tidewater, so that oil can be shipped cheaply. One company has bonded a strip of land two miles wide and 15 miles long.

ROUMANIA.

The Production of the Concordia Company.—The production of the Concordia Co. increased by the completion of boreholes Nos. 282, 286 and 94, has now reached about 500 tons daily.

The Anglo-Roumanian Petroleum Company is going to start shortly drilling its well No. 4 on the property taken over from Mr. Mihalik at Calinet. The company's wells Nos. 1, 2 and 3 on this property are yielding together between 15 and 20 tons of oil daily.

The Colombia Company, operating at Bustenari, has now a total daily production of 70 tons. The company is now expecting to strike oil with three of its wells on the Puturosa property. The derrick of well No. 82 of the Colombia Co has, on the 7th of December, been burnt down.

Good Results at Calinet.—The Concordia Co.'s wells Nos. 205 and 213 have both increased their yield from 60 to 70 tons daily each, the total yield of this property has thus been increased to 160 tons daily. Well E_2 continues to yield 15 to 20 tons daily. Well No. 209 of the Steaua Romana at Calinet, in spite of the pressure of 120 metres of water, continues to make eruptions from time to time, and producing thus between 60 and 70 tons of oil daily.

The Aurora Company.—The negotiations for the reconstruction of the Aurora Co. continue at Berlin. Mr. L. Witte, the general manager of the company, has again gone to Berlin, taking with him the balance sheet made up to the 30th November. This balance sheet shews a total loss to date of 2,300,000 francs, and a loss for the past year of 300,000 francs. The general meeting will take place in Bucarest on the 10th of January, by which time, it is expected, a definite settlement will be arrived at.

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LATEST QUOTATIONS OF PETROLEUM SHARES.

ENGLISH COMPANIES.

This list is restricted to companies who have paid dividends or who are producers.

Company.	Capital Paid Up.	Value of Shares.	Latest Prices.
Assam Oil	£205,000	£1	$\frac{9}{16}$-$\frac{11}{16}$
Baku Russian Petroleum ..	£750,000 Ord.	£1	0/3-0/9
,, ,, ..	£650,000 5½% Pref.	£1	6d.-1/0
Bibi-Eybat Petroleum Co. ..			5/0-6/0
Californian Oilfields	£385,000 Ord.	£1	4⅞-5⅛
Commonwealth Oil Co. Pref	fully paid (Prem.)		$\frac{11}{16}$-$\frac{13}{16}$
,, ,, Def..	£1 fully paid		$\frac{13}{16}$-$\frac{15}{16}$
European Petroleum.. ..	£550,000 Pref.	£1	1/0-2/0
,, ,, ...	£550,000 Ord.	£1	0/3-0/9
,, ,, ...	£376,000 Deb.	£100	68-72
Russian Pet. & Liquid Fuel ..	£500,000 6½% Pref.	£1	2/0-3/0
,, ,, ...	£600,000 Ord.	£1	2/0-3/0
Schibaieff Petroleum ..	£575,000 6% Pref.	£5	$\frac{3}{16}$-$\frac{7}{16}$
,, ,, ...	£575,000 Ord.	£1	0/6-1/6
Shell Transport & Trading ..	£2,000,000	£1	46/6-47/6
,, ,, ,, ..	£1,000,000 Pref.	£10	10⅝-10⅞
Spies Petroleum Company ..	£387,500	10s.	10/6-11/0

RUSSIAN COMPANIES.

Company.	Nom. Value in Roubles.	Quotations on Dec. 28th. Lowest Roubles.	Quotations on Dec. 28th. Highest Roubles.
Baku Naphtha Co.	100	345	347
,, ,, ,, (issue of 1908) 150 pd.	100	180	180½
Balakhany Naphtha Co.	250	—	—
Caspian Society	1,000	3,675	3,700
Mazout Co.	250	—	—
Melikoff, A. C.	250	—	—
Mirzoeff Bros.	250	—	—
Naftalan Co.	250	—	—
Naphtha Co. "Kavkas"	250	—	—
Naphtha Trading Co., A. I. Mantacheff & Co.	250	135	136
Neft Co.	250	—	—
Nobel Bros.	5,000	11,250	11,350
,, ,, ...	250	—	—
Rops and Co. V...	250	—	—
Russian Naphtha Co.	250	—	—
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Burmah Oil, Ord.	£1,100,000	£1	£4 14s. 0d.
Do. Pref.	£250,000	£1	£1 7s. 6d.
Dalmeny Oil Co., Ord. (7 paid) ..	£37,800	£8 10s	£5 7s. 6d.
Do. 5% Pref. ..	£18,900	£7	£4 12s. 0d.
Oakbank Oil Co., Ltd., Ord.	£170,000	£1	£1 18s. 3d.
Do. Pref. (fully paid)	£36,980	£1	£1 4s. 6d.
Do. Do. (10s. paid)	£63,020	£1	£0 18s. 3d.
Pumpherston Min. Oil Co., Ld., Ord. (17s. paid)	£110,500	17s.	£12 10s. 0d
Do. 6% Cum. Pref.	£100,000	£10	£13 10s. 0d.
Tarbrax Oil Co., Ltd. Ord. (£1 pd.)	£38,350	£1	£2 18s. 6d.
Do. 6% Cum. Pref.	£35,000	£1	£1 5s. 0d.
Young's Paraffin Co., Ltd., Ord. ..	£452,808	£4	£3 12s. 0d.
Do. "B" Deb...	£150,000	£100	£179 0s.

DUTCH COMPANIES.

Company.	Latest Quotations (per cent.)	Florins
Arnhemsche Petroleum Mij.	—	1,000
Aurora ,, ,, (Deb. 5%)	78½	—
Campina Poiana Mij.	—	—
Dordtsche Petroleum Mij. (Ord)	144½	—
,, ,, ,, (Pref.)	128¾	50
,, ,, ,, (Deb. 4½%)	102½	1,000
Gaboes ,, ,, ...	—	—
Holl. Rumeensche Petroleum Mij.	50	1,000
Int. Rum. Pet. Mij.	19¾	500
Java Petroleum Mij. (Ord.)	—	1,000
,, ,, ,, (Pref.)	11	—
Koninklyke Nederl. Pet. Mij. Shares	322¾	100-1,000
,, ,, Share certificates	319½	1,000
Mœara Enim Petroleum Mij.	147¾	100
,, ,, 1-1,000 Oblig. 5	—	250-1,000
"Moesi Ilir" Petroleum Mij.	—	—
Nederl.-Rumeensche Petroleum Mij.	$4\frac{1}{16}$	—
Nieuwe Ned. Petroleum Mij. And.	—	1,000
Oklahoma Petroleum Co.	105½	—
Oliebronnen in Hannover Mij.	80	—
Panolan Maatschappij Cert.	265	—
Perlak Petrol. Mij. (6% cum. pr. A.)	134¾	1,000
,, ,, (Common)	—	—
Sumatra-Palembang Petroleum Mij	117⅝	500
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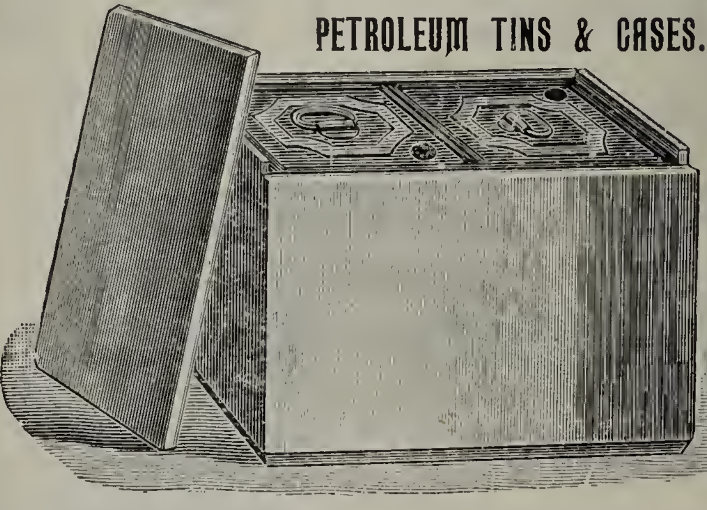

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American Office: 150, Nassau Street, New York.

Saturday, January 2, 1909.

THE SCOTCH OIL TRADE DURING 1908.

Though near to home, it is surprising how little one hears of the progress of the shale oil trade of Scotland until each of the respective operating companies publish their annual reports. Therefore, a few words upon this not unimportant factor in our petroleum trade may not be without its special interest.

In the first place, let us say that events have proved that during the year just closed, the reflection of the world-wide depression has not been nearly so serious in Scotland as at one time contemplated. At the same time nearly all the home products have fallen in value, and taking for the sake of comparison the prices ruling now as against a year ago their values may be decided as having fallen by ¼d. per gallon in burning oil, 3½d. per gallon in shale spirit, 2d. per gallon in motor spirit, 15s. per ton each in lubricating and gas oils, 15s. per ton in sulphate of ammonia, and ¼d. per lb. in export paraffin wax. These substantial reductions just given, however, do not represent the actual prices realised for the companies' products for the year owing to the system of selling ahead engaged in early in the season, when prices in the case of lubricating and gas oils ruled higher, and when large quantities of these were placed. Whilst the better prices thus obtained will assist in minimising the reductions all round at date, yet there is certain to be some shrinkage compared with the previous year's figures.

On the other hand, the period of depression already alluded to, has permitted the companies to enjoy a year of cheaper costs of production, particularly in the important item of wages, where, following the sliding scale of the Coal Conciliation Board three reductions have taken place in the shale miners' wages during the past twelve months amounting to 1s. per day.

As shewing the highly satisfactory position of the Scotch oil companies, their respective profits and dividends may be recalled, as shewn by the last reports. These, including balances brought forward, were as follows :—

Name.	Total Profits. £	Undivided. £	Divided. £	Dividends. Per cent.
Pumpherston	130,123	68,873	61,250	50
Young's ..	114,429	54,000	60,429	7
Broxburn ..	79,676	38,720	40,956	17½
Oakbank ..	49,445	23,945	25,500	15
Tarbrax ..	21,170	9,020	12,150	15
	394,843	194,558	200,285	

It will thus be seen that the five principal companies here mentioned continue upon their usual conservative lines of dividing amongst their shareholders about one-half of the amount earned, retaining the other half to meet depreciation and renewals, and to increase their reserve funds, thus continuing their policy of placing their properties upon a sound and safe financial basis to meet whatever contingencies may arise. Over and above the savings already referred to, and which should be mentioned as a further set-off to the reduction in prices, are the further improvements continually going on, especially in the application of electrical power and other fuel and labour-saving appliances at all the oil works and their shale mines, all of which necessarily aim at more economic production.

Extensions of works have also been proceeding at the Deans section of the Pumpherston Co., the Roman Camp Works of the Broxburn Co., and the Niddry Castle Works of the Oakbank Co., where each has been adding considerably to its retorting power, and which when completed means an increased output of crude oil at a reduced cost per gallon in the manufacture. Young's Paraffin Co. have been turning their special attention to the development of their lately acquired extensive coalfield on the estate of Baads, closely adjoining their Addiewell Works, and where an output of about 200 tons per day has been reached of a quality particularly useful for their own requirements, and, as in the similar case of the Pumpherston and Tarbrax Companies at Woolfords Coal Pit, places them in a more independent position in securing regular and cheap supplies of coal against buying in the open market. The Oakbank Co. in the course of the year raised additional capital to the extent of £100,000 in the form of 6 per cent. preference shares of £1 each and which were all applied for. This extra capital permitted them to strengthen their financial position by paying off loans, and to turn their attention to the development of their newly acquired and extensive shale fields of New Farm, Easter Breich, and Westwood, all in proximity to their works at Oakbank, and where in each field excellent shale has been proved to exist, thus deciding the continuance of their works there, and taking the place of their field at Calderhall estate, which is about wrought out after serving the company for over 40 years.

Many of the Scotch oil companies have of late been greatly disturbed in regard to the question of the road-car distribution of illuminating oils, and from inquiries in official quarters, we are given to understand that the policy now inaugurated by one or two of the principal concerns in distributing their illuminating oil by means of road-cars to the Scotch villages, is shortly to be followed by others, so that there is some likelihood of the old system of distribution in Scotland, giving place to the new method which has for years been so popular in England.

Taken on the whole, the past year may be said to have been quite satisfactory to those engaged in the Scotch oil trade, and there is every reason to believe that the dividends paid by the respective companies last year will be repeated as a result of recent operations.

◆

To Cater for Manchuria.—Messrs. Nobel Bros. have entered into a contract with the Eastern Chinese Railway to lease from the latter for 12 years all the oil storage depôts which the railway have and which it may during that period erect. These depôts have a capacity of 10,000 poods. Messrs. Nobel Bros. undertake to sell within the area served by the railway only oil of Caucasian origin, and also that the transport of oil from Vladivostock shall be done all the way by rail and not by water.

In Louisiana.—Oil production in Louisiana in November is reported at 433,100 barrels, an increase of 19,000 barrels, as compared with October. Shipments reported by rail were 206,073 barrels; by pipe line, 161,000; total 367,073 barrels. This does not include oil delivered to local refineries or used in the field. There were 14 new wells completed in the Louisiana field during the month, of which eight were oil producers, one a gas producer and five dry holes. There were 43 wells in progress at the end of the month.

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OIL COMPANY MEETINGS.

(SPECIALLY REPORTED FOR THE "REVIEW.")

THE COMMONWEALTH OIL CORPORATION, LIMITED.

The third ordinary general meeting of the shareholders of the Commonwealth Oil Corporation, Ltd., was held at the Westminster Palace Hotel, London, S.W., on Thursday last, the Corporation's chairman—Sir GEORGE NEWNES, Bart., M.P.—presiding over a large attendance.

The directors' report, which was taken as read, stated that the directors desired to express their deep regret at the loss the company had sustained through the death of Sir William B. Avery, Bart., who until the last took an active interest in its affairs. Mr. William Blyth retired at the beginning of the year, and Mr. Walter Chamberlain consented to occupy the vacant seat on the Board.

Development in the shale mines in the Wolgan Valley has continued steadily. Extensive driving has been carried on and a large tonnage of shale extracted. In addition to this work in the shale seam through the mountain towards the Capertee Valley, another mine has been developed on the south side where shale of equally high quality and thickness is being mined, How far the deposit may extend on the south side it is impossible to say, but a recently published section by the Mines Department of the Government assumes it to extend the whole length of the Corporation's railway line.

Of the shale mined in this valley, about 15,000 tons have been carried over the Corporation's railway for export or retorting purposes; fully two-thirds, being of high quality, was exported for gas making purposes. The sales of export shale last year were not as large as anticipated, but this winter orders for quantities of several thousand tons and for trial samples of 100 to 500 tons shew that an increasing number of gas companies are returning to the use of shale as they find the rich gas obtained from Wolgan shale possesses high calorific value, a factor of equal importance to its high illuminating power.

The average yield of the entire thickness of the seam gave over 100 gallons per ton of crude oil, and the retorting shale left after separation of the highest or export quality, contained about 70 gallons of crude oil per ton, a considerable quantity yielding over 80 gallons per ton. The quality of the shale for retorting purposes, and the manufacture of crude and refined oils has been thoroughly tested on a working scale. Fully 5,000 tons of this shale were conveyed by rail to Torbane and treated in the new Pumpherston retorts erected there. The results were most satisfactory. The products of Wolgan shale have, therefore, been proved to be of the quality and character indicated by the preliminary tests.

Amalgamation of the leases having been effected last year further developments in the Capertee Valley were temporarily suspended. Mr. Sutherland inspected the work done, and considers the existence of the long tunnels through the continuous bed of shale is of great valve in demonstrating the enormous extent of the reserves, and the possibilities of subsidiary companies when the parent enterprise is fully under way. The longest of these tunnels extends southwards towards the Wolgan Valley for nearly a mile, the average thickness of the shale being four feet without break or fault and continuing all the way of exceptionally high quality, the average of the entire thickness yielding more than 100 gallons of crude oil per ton.

Early in the New Year 104 coke ovens are expected to be at work. For some months 44 have been working and making coke of first-class quality, which is universally acknowledged to be the best coke in Australia, and equal to English (Brancepeth) coke. In addition to the contracts already entered into, there is a large sale for this product both in Australia and for export at prices which leave a profitable margin. This is one of the branches of the company's business which can be most rapidly developed, and the directors desire to increase the number of ovens to two or three times the number of those already built and in course of construction, believing that the extra capital outlay will earn large interest. The value of the company's properties has been largely enhanced by the splendid development of its coal mines and the proved quality of its coke of which several thousand tons have been used for smelting purposes with the best results.

A very large amount of work has been carried out in connection with the construction of crude oil works and refineries in the Wolgan Valley. Extensive preparations were required for the site, and as soon as the staff engaged in the erection of the first bench at Torbane could be spared, the work of construction was commenced. The first of the series of benches, each containing 64 retorts, is well advanced. All the material, as well as the condensers, boilers, power and refrigerating plant, is on the ground. Buildings are being constructed, and preliminary work on the refinery, which will be one of the most up-to-date character, is being steadily carried on.

Machine shops with very complete outfit have been installed, and will enable much of the construction of the works to be carried out on the spot.

The Corporation's railway line was extended during last year from the Government railway at Newnes Junction to the mines and works in the Wolgan Valley, a total distance of 32 miles. It has been working since very satisfactorily, carrying materials for the construction of the works as well as export shale and coke to market.

It may be noted that, despite a stoppage of ten months, the year's results of the New South Wales Shale and Oil Co have only shewn a small loss after writing off all expenses incurred thereby, and making some provision for depreciation.

The 32 new retorts erected at the Torbane works were started last August, and have since been running most satisfactorily. The crude oil obtained was as anticipated greatly superior in quality to that produced by the old retorts. Its pale olive green colour indicated its excellent refining quality, the specific gravity was light, being about 0·880 as against 0·910, and it consequently contained a higher percentage of illuminating oil. An increased yield was obtained by the Scottish retorts, according to the quality of the shale treated. The volume of gas given off was so great that it was more than sufficient for the heating of the retorts, with a large balance still available for other purposes.

The Hartley Vale Refinery is being extended, and in the course of the next few weeks it is expected that refined oils will be placed on the market in addition to the candles and other products now being marketed.

Although a considerably increased tariff upon machinery and other plant imported into Australia has during the last year added very considerably to the company's expenditure in excess of the original estimates, only a very slight additional assistance has been given to the industry in the recent revision of the tariff. In view of this, it is encouraging to learn that the Federal Government, with a desire to stimulate the extension of these operations and the consequent employment of a larger amount of labour, has under consideration a proposal to give a bonus upon the production of shale oil in Australia.

The CHAIRMAN in moving the adoption of the above report, referred to the death of their friend and colleague, Sir William Avery, and then announced that Mr. Walter Chamberlain had been elected to fill the vacancy. Before going into the question of the progress which had been made during the year, he wished to refer to the last annual meeting, and to the speech he made on that occasion Perhaps it was always a dangerous thing for the chairman of a public company to make statements with regard to future dividends, but he had been so frequently requested by shareholders to make a definite statement as to what the directors considered would be possible as to approaching dividends that he decided to respond to the appeal. Accordingly, Mr. Sutherland and himself went carefully into the position with regard to their trading, with the result that he made a forecast at that meeting. Nothing in those calculations had proved incorrect, except as to the time.

There were two causes which led to the delay. In the first place, the men at Torbane were not working. There had been a strike in August, and the men were warned that if they did not return immediately, and if the retorts had to be cooled down they would not be restarted until certain repairs and alterations had been effected. This could not be done before January The retorts and refineries at Hartley Vale continued working, and were earning profits at that time. The local management advised the board that the men at Torbane would return in January as soon as the management was ready for them. However, they did not return, and it was thought best, in the interests of the company, that work should not be resumed until a complete understanding had been arrived at with regard to the labour question. Terms were not agreed until May, some three weeks after Mr. Sutherland's arrival. Hitherto, the contracts had been made from year to year for one year only, and never had the men been known to break them. The conditions had now been settled for three years, which it was believed would be to the advantage of the company, and add to the prosperity of all concerned.

The second cause was that the establishment of the export shale business on a large scale had taken longer than they hoped. He thought he could not do better than quote the paragraph in the report which stated that "of the shale mined in this valley about 15,000 tons have been carried over the corporation's railway for export or retorting purposes; fully two-thirds, being of high quality, was exported for gas-making purposes. The sales of export shale last year were not as large as anticipated, but this winter orders for quantities of several thousand tons and for trial samples of 100 to 500 tons, shew that an increasing number of gas companies are returning to the use of shale as they find the rich gas obtained from Wolgan shale possesses high calorific value, a factor of equal importance to its high illuminating power." The sales of export shale had only been delayed, and this winter they were receiving interesting orders for large trial samples, and they had just received a repeat order of about 5,000 tons, shewing that the first 5,000 were satisfactory. Had it not been for these causes all the hopes he held out would have been realised. He had nothing to retract from his last speech, except as to the time. He might be considered to have been optimistic, and certainly, under pressure from shareholders for a definite statement he raised hopes which had not yet been realised, but he hoped that at any rate the shareholders would believe that he spoke in good faith.

He wished at this stage to read a cablegram from Sir Robert Lucas Tooth, the chairman of the Bank of New South Wales. Sir Robert had always taken a friendly interest in their enterprise, and decided to visit the property and see for himself what had been done. He arrived shortly before Christmas, and on the 23rd inst. sent the following cablegram:—"Visited the mines and works; impressed with the magnitude of the enterprise; the railway is a striking work; consider Commonwealth Oil Corporation's prospects favourable; coke output considerable, certainly profitable." Those words which Sir Robert used—"magnitude of the enterprise"—accounted for the delay with regard to which many of them had been naturally disappointed. Their property was well called "The Treasure House of the Wolgan Valley." It might be asked why they did not sell coal instead of coke? The answer was simply that making coke was more profitable, and, further, there was not the same demand for coal. He had the greatest faith in the company. In conclusion, the chairman intimated that there would have to be an increase of capital.

Mr. Walter Chamberlain, J.P., in seconding the motion, said that before accepting a seat on the board he naturally wanted to know something about the company, and therefore sought out Mr. Sutherland, who was then on the eve of his departure for Australia. He had several long interviews with him, and that gentleman met him perfectly openly and frankly, answering all the numerous questions he put to him. As far as he knew, nothing whatever was concealed, and, as a result of the information received, he accepted the seat. Needless to say, he would not have done so unless he had satisfied himself that, provided certain conditions were fulfilled, there was every reason to expect that this company would be brought within a reasonable time to a dividend-paying position. He also satisfied himself that those whose co-director he was about to become were acting in perfect good faith and loyalty to the shareholders.

With regard to the future, he had said that he had great confidence in the company provided certain conditions were fulfilled. One of the most important to them, as shareholders, and important to him in his individual position, was that the shareholders should be willing and ready to support the board loyally and freely in their efforts to make the company a success. One of the conditions was that they should have more capital found. In his opinion, and no doubt it was the opinion of the shareholders too, the company required more capital to carry out its work as it intended to do. Their General Manager—Mr. Sutherland—was a Scotsman and had all the characteristic caution of his countrymen. He was very careful in every statement that he made, and was extremely anxious not to mislead the shareholders as to the future; but if he (the speaker) stood in his place and let out a little bit, he was perfectly certain he could persuade the shareholders, without any difficulty, to agree to any reasonable means which might be found of raising capital in order to continue the work of this company as it should be continued. The work of development had taken a good deal longer than was expected, but, so far as he could see, Mr. Sutherland had made no material mistake whatever in his work. His work had gone on smoothly and well, and had only been delayed by circumstances over which he had no control. The clock, if he might put it so, which was unduly advanced, had been set back, but its works were in no way injured, and it would go again just as well as ever it was meant to do. So far as he could see, nothing whatever had happened to set aside the original calculations upon which the company was formed, and upon which most of the shareholders subscribed for their shares. As Mr. Sutherland would tell them, the shale had been proved to such an extent that they need not concern themselves so far as regarded its profit-earning capabilities and its potential value, and it had also been proved on a commercial scale. An immense deal of development work had been done and a large amount of prospecting work had been put in. There could be no doubt whatever that there was a large profit now commencing or, he thought, that it would be very large in the future.

Mr. D. A. Sutherland, F.I C. (the company's consulting engineer and general manager), in the course of an interesting and explanatory speech, said that as to the further development of the shale, they had in all driven in their mines somewhat over 40,000 feet, so that there was ample data to-day for the measurement of the large quantity of shale. To a large extent the figures had been based on his assumptions. In the first place, shale was not visible at all in many places until they had driven in and got it. By last year he was able to give the shareholders some very large quantities indeed, and all the work they had done since had gone to prove those large quantities. He was not afraid of any investigation as to the quantity of shale in the mines, and as to the quality, that had been absolutely proved by the treatment of 5,000 tons of the Wolgan shale through the retorts at Torbane.

Mr. Sutherland proceeded to explain that the company was in the first instance devoting its attention strictly to the work of the New South Wales Co., to the coke they were developing, and to the export shale business. They had a large coal mine at Newnes, and coal mines at Hartley Vale and Torbane that supplied coal to their own works at a cost of something like 4s. a ton. They had at Torbane a coal seam 15 ft. thick, and although it did not happen to be of coking quality it did make a fair coke. He had by him details of the plant which had been installed which was open to any shareholder to see, but he might say that they were now erecting a thoroughly up-to-date and modern refinery. In connection with the work at the property he had not spared himself in any way, and in that connection he was glad to say that the staff in Australia had worked loyally and had done everything they could. There was a large demand for the company's product in Australia. The consumption of the illuminating oil had increased during last year from 15,000,000 gallons per annum up to 20,000,000 gallons per annum. There was no question of the demand as to their other products, such as coke, to which the chairman had referred. In conclusion, he said that he had the strongest possible faith in the future success of the company.

Concluding, the speaker said he had cabled figures as to the results obtained since the starting of the new retorts for September and also those for the second quarter, which were practically double what they were in the first quarter after the restarting of operations. He knew from the fresh work which they were starting now, the results of the next quarter should be doubled again. They were getting on a satisfactory basis in connection with the work of the New South Wales Company, and he was sure the shareholders would be satisfied when they saw the returns from the New South Wales Company this year, and realised that it was a very valuable purchase that was made.

The report was then unanimously agreed to, and after the appointment of Mr. Walter Chamberlain as a director had been confirmed, and Mr. R. L. Harmsworth, M P., re-elected to a seat on the board, a hearty vote of thanks to the Chairman concluded the meeting.

BAKU RUSSIAN PETROLEUM COMPANY, LTD.

The ninth annual general meeting of the shareholders of the Baku Russian Petroleum Co., Ltd., was held at noon on Thursday at the River Plate House, the company's chairman—Mr. Herbert Allen—presiding over a large attendance of shareholders.

In moving the adoption of the report, which covered the operations of the company for 1907, he explained that the document was very belated, and formed little more than ancient history. The meeting would not have been held that day, however, had it not been that the Act of Parliament now made it compulsory that a company should hold a general meeting once in every twelve months. In the report of the directors the shareholders would notice that one of the customary features was missing, and that was the general manager's report. The reason for that was that for the past six months or so they had had no general manager, for the Russian creditors of the company had taken possession of the undertaking at Baku, and the management was assumed by a committee of the Russian creditors. He noticed that during the time their company had been in existence 17 directors had come and gone—most of those gentlemen holding high and honourable positions in the commercial and financial world. They had had four chairmen of their company, and that being so, he did not think they needed to look further for any explanation of the present position of their company. Russian oil companies of all other concerns were undertakings in which a continuity of policy and management were absolutely necessary, and the frequent changes which they had had upon their directorate were sufficient to explain the unfortunate position of their company. With regard to the production of oil at their properties, although that shewed an improvement over the amount for the previous year—it was 13,000,000 poods gross—it was no good to their company even at the present prices. They wanted 15,000,000 poods net, and until they got that, their company would never do any good, even taking oil at abnormal prices. At the present time the production was not one-half what it ought to be, nor was it likely to improve until they got the property back into their own hands, and appointed new managers. In fact he was expecting a further diminution. With a net production of 15,000,000 poods at 20 copecs per pood, their company could make handsome profits. They wanted good properties—and they all recognised that their properties were good—then they wanted fair market prices, and the third and most essential thing was efficient management. Last year their managers succeeded in getting an average price of 26·33 copecs per pood for the oil, whereas, the market price as fixed in Baku was 26·02.

As to their wells, at the present time many of the old producing wells were closed down, and on many of the new ones which were nearing completion, work had been stopped. Upon the new work a sum of £106,000 had been spent during the year, a somewhat similar sum to that expended for the previous twelve months, but as they would see, the whole of the benefit from that expenditure had yet to be reaped. The Chairman then moved the adoption of the report and balance sheet.

Mr. Barnett seconded the motion.

Mr. A. C. Holzapfel then made an explanation to the meeting regarding the past proceedings of Mr. Rutherford and himself and also of the independent Shareholders' Committee. Referring to the scheme of Dr. Dvorkovitz, he said that it could no doubt be altered into acceptable form, and if such a scheme were adopted, he had no doubt that the onerous reconstruction proposed by their Chairman could be avoided. Thus the shareholders would save not only the cancellation of their present shares, but also the sum of about £150,000 profits which under Mr. Allen's scheme would flow into the pockets of the reconstructing financiers. If as Dr. Dvorkovitz suggested, profit sharing debentures were issued, he would personally be willing to underwrite £1,250, and he would recommend all section of shareholders to do the same thing.

Dr. Dvorkovitz said that it was useless to go into the details of either the report or the balance sheet, because as would be seen from what their chairman had said, the board declined all responsibility. With reference to the directors' scheme for reorganisation, Mr. Barnett had suggested that the details had been divulged by Mr. Holzapfel, although they ought to have been looked upon as strictly confidential. But why so? Mr. Holzapfel was appointed by the shareholders' committee to confer with the board, and therefore, as soon as he (the speaker) found that the board were formulating their new scheme, he waited upon Mr. Holzapfel and obtained, as he had a perfect right to obtain, the information he desired. He then issued his circular in which he detailed his own scheme for reconstruction, for he felt that in any scheme for reconstruction it would be far better for the shareholders to participate in any profits made, rather than that outsiders should step in and take thousands of pounds. He had worked out his scheme so that it would be fair to both the preference and ordinary shareholders, and if only the board would adopt the principle of the profit sharing debentures, then undoubtedly representatives of the board and the shareholders' committee could work out the scheme in such a manner as to be acceptable to all. He had had for thirty years a direct interest in the Russian oil industry, and he looked towards the development of the interests of the English companies in Baku with great favour yet with great anxiety, and that was why he came forward in an endeavour to assist the shareholders to make the best of their valuable property and not to let it pass into the hands of those local people who were to-day waiting to get it.

Mr. George Tweedy, in the course of his remarks, said that five years ago, he had warned the then board of directors that they were in the hands of schemers, who would rob the shareholders of their money, and that day he made the statement that those schemers, one way and another, had taken from them £1,000,000 in the five years. What they wanted on the board of that company were men of experience in the oil industry—not barristers, etc. During the past 2½ years, the directors had spent more money on capital expenditure, than he (the speaker) spent during the five years he was with the company. During his regime, he raised the production from 17,000,000 poods in 1899 to 24,000,000 poods in 1903, and to an increase of 2,000,000 for the following year, but in the 2½ years the board had pulled the production down to 8,500,000 per annum, although having spent more money.

A number of other speeches were made, and eventually the report was passed, and the meeting adjourned *sine die*, so that the board might come forward with their proposed scheme.

[Owing to the fact that the meeting above reported was only held the day before our going to press, it has been impossible to comment upon the proceedings in our ordinary editorial columns, but we should say that the conduct of Mr. Herbert Allen in the chair was most exemplary. He gave both sides a fair and impartial hearing, and there is no doubt that the continuance of such a spirit will do almost all that is necessary to pull the company together. We feel that it is our duty, in all fairness to Mr. Allen, to make this comment.—Ed. *P. R.*]

THE ANGLO-CALIFORNIAN OIL SYNDICATE, LIMITED.

The second annual meeting of the shareholders of the Anglo-Californian Oil Syndicate was held at Winchester House, London, E.C., on Thursday, the company's chairman—Mr. Magnus Mowat—presiding.

The annual report of the directors, which was taken as read, stated that though the progress recorded since their last meeting had been marked by safety rather than rapidity, it had been done to the entire satisfaction of the board and their technical adviser. Well No. 1 was now at a depth of 2,550 feet, and the earlier telegraphic reports that the well was "very gassy, with a good showing of oil" are further confirmed by the report from the local committee dated 20th November. It was specially gratifying to note that the gas pressure was both constant and increasing with the depth, accompanied by "quite a showing of oil." Those satisfactory indications supported the directors' anticipations that they were in close proximity to the oil-bearing strata. Difficulties arising from exceptionally hard strata and the usual caving and influx of water in boring had necessarily been encountered, but care and ability had checked them, and it was hoped that the safeguards which had been and were being consistently adopted would contribute to more rapid progress. Well No. 2 had reached a depth of 1,950 feet, the boring being conducted under conditions closely resembling those experienced in Well No. 1.

The Chairman, in moving the adoption of the report, said that it was so explanatory that he did not think it necessary to comment upon it at length. The shareholders, however, would be interested in knowing that the necessary casing to carry them to a depth of 3,000 feet in both wells had been paid for, so their present outlay was confined to drilling and administration expenses. The oil situation in California was satisfactory and prices of crude oil were advancing. There was an old adage which said, "Where there was a will there was a way," and they on the board meant to do their utmost to bring the syndicate to a success, and he hoped early in the new year they would strike oil. The most recent cable from the local committee said "Anglo operations never in better shape."

Mr. Chapman, in seconding the resolution, said that he was very much interested in the syndicate, and he had many friends in it. He looked forward to success in the very near future.

Mr. Wm. Shyvers, who, as was mentioned at the time in the Review, visited the company's properties during 1908, explained that he had found everything thoroughly satisfactory. Their workmen were all practical men, and they had had exceedingly hard luck in not striking oil earlier. He had made a close study of the logs of their company's two wells, and compared them with Government geological reports of the district, and throughout those logs the similarity of strata was remarkable and encouraging. He had every reason to hope that by patience and careful work their labours would be rewarded with success.

The company's technical advisor—Sir Boverton Redwood—then delivered an interesting speech, dwelling in detail upon the principles which governed the geologists in arriving at a conclusion as to the presence or otherwise of oil. A shareholder had inquired as to the average depth of Californian wells, but to give a reply to that question would possibly cause some misconception. The variation in depths was considerable, but he believed that not until they had gone down something like 2,800 feet, or it might be an even greater depth, could they be said to be approaching, or to have passed the productive oil sands. Considerable progress had been accomplished during the year, for apart from the careful boring which had proceeded, the work of shutting off the water by cementing had been carried out, and it was a cause for gratification that neither of their boreholes had been lost nor in danger of abandonment.

The report of the directors was carried, and the election of Messrs. J. Chapman and W. J. Fackham as directors unanimously agreed to, a hearty vote of thanks to the chairman, Sir Boverton Redwood, and the drilling staff and superintendent in the Lompoc field bringing the meeting to a close.

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RUSSIAN OIL COMPANIES.

The Russo-Caucasian Naphtha Company in 1907, its fifteenth financial year, had a revenue of 2,357,783 roubles, which left a net profit of 57,106 roubles. A dividend of 6 per cent. was distributed. The company has debtors for 329,842 roubles; creditors, 595,905 roubles; nominal capital, 300,000 roubles; depreciation fund, 396,926 roubles.

The Ter-Akopoff Petroleum Company in 1907, its eighth financial year, had a gross revenue of 1,358,038 roubles, which left a net profit of 425,494 roubles. A dividend of 4 per cent. was distributed. There is still a balance of the loss incurred in 1905 of 466,000 roubles not written off. The company has debtors for 158,086 roubles; creditors, 1,102,188 roubles; nominal capital, 4,500,000 roubles; depreciation fund, 797,376 roubles.

Messrs. A. S. Melikoff and Co. in 1907, their seventh financial year, had a gross revenue of 592,375 roubles, and a net profit of 255,366 roubles. The balance of losses of previous years amounts to 584,538 roubles. There are debtors for 317,341 roubles; creditors for 872,489 roubles. The nominal capital is 2,000,000 roubles; amortisation fund, 134,005 roubles.

The Shikhovo Petroleum Company, operating at Baku, in 1907, its sixth financial year, had a gross revenue of 1,673,583 roubles, and a net profit of 749,767 roubles. No dividend is being distributed. The company has debtors for 159,524 roubles, and creditors for 585,627 roubles. The nominal capital is 3,000,000 roubles, and the depreciation fund stands at 1,576,345 roubles.

The St. Petersburg Petroleum Company, operating at Grosny during 1907, its ninth financial year, concluded its operations with a loss of 15,691 roubles. The total loss to date is 70,425 roubles. The company has debtors for 525.583 roubles and creditors for 938,672 roubles. The nominal capital is 960,000 roubles.

The Tcheleken-Daghestan Petroleum Company, operating at Grosny, with the head office in Moscow, in 1907, its sixth financial year, received a gross revenue of 276,666 roubles, which left no profit. The company has debtors for 20,243 roubles and creditors for 358,529 roubles. The nominal capital is 1,000,000 roubles.

The First Grosny Petroleum Company, in 1907, its thirteenth financial year, had a gross revenue of 133,990 roubles, and a net profit of 5,152 roubles. The company has debtors for 16,342 roubles; creditors, 26,436 roubles. The nominal capital is 800,000 roubles and the depreciation fund now stands at 200,021 roubles.

THE BINAGADI OIL FIELD.

In addition to the four principal producing fields near Baku, Balakhany, Saboontchi, Ramany and Bebe-Aibat, a certain importance also attaches to the fifth field of Binagadi, which is away from the centre of the petroleum producing industry.

The first attempts to exploit this field proved unsuccessful owing to the small yield of the wells. Now, however, when prices of crude oil are so high, even the small quantities obtainable at Binagadi have acquired some importance, and have become the object of exploitation in various ways. We find there at the present time technically equipped enterprises, and also persons working in the most primitive way, drawing the oil in buckets from shallow pits and carting it away in barrels.

Boreholes at Binagadi are shallow, the depth never exceeding 1,050 feet, whilst at Baku wells are sometimes drilled to 2,100 feet, and at Grosny even to 2,800 feet. The hand-dug wells are sunk a maximum depth of 350 feet. The daily yield of a borehole does not exceed 300 poods, whilst the hand-dug wells yield no more than 50 poods. The rate of output satisfies the requirements of the small producers.

There are four pipe lines through which Binagadi crude oil is pumped to Baladjari Railway Station, whilst one pipe line connects the Binagadi field with the Black City refinery district. Binagadi crude oil, however, is but rarely submitted to refining in view of the small percentage of kerosene fractions contained in it, and, of course, the entire absence of benzine. The high specific gravity of the oil, which is 0·910 to 0·920 and more, precludes the possibility of obtaining any light products from it. The bulk of Binagadi crude oil goes direct for use as fuel without any preliminary treatment, and is delivered into tanks of the Transcaucasian Railway, and partly also to the Vladicaucasian Railway at Baladjari Station.

The specific character of Binagadi crude oil, which, owing to the difficulty in consequence of the heavy specific gravity of separating water from it, is a serious obstacle to the development on a large scale of the petroleum producing industry at Binagadi.

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ANGLO-MEXICAN OILFIELDS, LTD.

The Manager reports by cable as follows:—"Well No. 1, the depth is 1,656 feet, increase of 26 feet. The formation is hard grey shalerock. Well No. 2, the depth is 2,437 feet, increase of 59 feet. The formation is soft grey shale. Will commence borehole No. 3 within three weeks."

◆

NIGERIA BITUMEN CORPORATION, LTD.

The Manager cables as follows:—Borehole No. 5; depth 764 feet (increase 23 feet), formation soft grey clay. Borehole No. 6: depth 564 feet (increase 82 feet), formation, soft grey sandrock; pyrites. Borehole No. 7: no particulars received from location.

THE ADULTERATION OF PETROLEUM PRODUCTS.

A writer in the latest issue of the *Neftiannoie Dielo* publishes the results of his investigations into the question of the adulteration of petroleum products, more particularly of lubricating oils. For the purpose of his investigations the author, with the aid of the Excise officials, secured numerous samples of lubricating oils direct from large consumers such as manufacturers, engineers and the leading railways.

Although the chief Baku manufacturers have depôts of lubricating oils at all the principal centres in Russia the majority of private consumers obtain their supplies not direct from these depôts but through brokers. The broker generally is a man of small means who acts as agent for the sale of the manufacturers' goods and at the same time increases his rather meagre earnings by undertaking to provide the works with sundry supplies, including lubricating oils. The broker's legitimate profit on the lubricating oil cannot be large, and his only way of augmenting it is by adulterating it with cheaper materials. This is rendered possible by the careless manner in which the question of the quality of the lubricating oils used is treated by most of Russian manufacturing firms, the matter being left to the discretion of inferior employés. Of course, sooner or later the unsatisfactory nature of the lubricant is bound to shew its effects on the machinery, but any reduction in the effective work of the engine easily escapes the notice of the management as it is easily covered by a greater expenditure of steam and oil, the increased cost becoming submerged in the total working expenses. As to any actual serious damage to the machinery through unsuitable lubrication, this can occur only in exceptional cases of particularly careless attendance and can always be staved off by the temporary use of a high-class lubricant such as Vacuum oil.

There is an abundance of cheap materials available for adulteration purposes in the form of the heavy lubricating oil residuals and Grosny mazout, which are exempt from the tax. Adulteration with this material is, however, possible only in the case of the non-transparent or dark lubricating oils such as heavy cylinder oil, viscosine, valvoline, Schibaieff Oil No. 000, etc., which are the most valuable oils. Machine oils, the characteristics of which are colour and transparency, cannot be adulterated with mazout. In the case of dark cylinder oils, where colour and transparency cannot be used as a test, and where the adulterating material has a certain similarity to the genuine article in viscosity, flash point, gravity and contents of tarry matter, the adulteration can be detected only by a rather complicated investigation, the carrying out of which requires time, preparation and costly apparatus, and are, therefore, rarely applied in accepting delivery of even large quantities, not to speak of small deliveries. This must be accepted as the only explanation for the very doubtful quality of the article which is termed cylinder oil and is supplied as such in considerable quantities to some of the leading engineering works in south Russia.

It must be admitted that the importance of each individual property of a lubricating oil, such as viscosity, density, and even contents of tarry matter in the general lubricating capacity, is still far from established, and the standards fixed for their products by the leading Baku refiners are quite arbitrary. For this reason, consumers allow considerable deviations from these standards, which in its turn gives free play to adulterators. Thus, for instance, the lowering of the flash-point and gravity with an increase in viscosity at the cost of increasing the percentage of tarry matter may pass undetected for a short time in the working of an engine, and the changing of the quality of a lubricating oil in this manner may considerably reduce its cost, and is brought about by adding mazout or a mixture of solar oil and goodron, etc.

The adulteration of light machine oils is more difficult, and offers smaller profits. The only article suitable for the adulteration of transparent machine oils is heavy solar oil. However, there being a marked difference between the respective properties of the two articles, only a small percentage of the adulterating material can be used.

The respective properties of the two products are :—

	Solar Oil.	Machine Oil.
Specific gravity	0·890	0·906 (minimum)
Viscosity at 50° C.	2 (maximum)	6·5 ,,
Flash-point	160° C.	180° C.

Thus even one-third admixture of solar oil brings the product down to the lowest gravity admissible for a machine oil –0·902–and makes it so fluid that its want of viscosity is easily felt by touch. Moreover, the difference in price between the two products is not great, and even by adding 30 per cent. of the solar oil the advantage to be gained by the operation would not exceed 6-7 per cent., which scarcely justifies the risks attached to such enterprise. These considerations are fully borne out by the results of the tests made by the author, which have shewn that machine oils are generally obtained by the consumers in their pure state and without any adulteration.

The oils which lend themselves most easily for adulteration are the heavy cylinder oils, and more particularly the viscosines of the 000 and 000 Extra brands, manufactured by Nobel and Schibaieff respectively, the operation being both comparatively easy and highly profitable.

For cylinder oils the limits of specific gravity are considerably wider than those for machine oils. Their viscosity can hardly be determined at all at 50° C., and 100° C. it varies between 1·8 and 15 whilst the variation in flash begins only beyond 200° C. (by the Martins-Pensky apparatus). The lighter kinds of cylinder oils are thick, of a dark cerise colour, and their transparency becomes noticeable only in very thin layers, whilst the heavier grades are completely non-transparent. Similar properties are possessed also by various kinds of residues of distillations both of the kerosene and lubricating oil manufacturers. The lubricating properties of these products are so high that they are used without any preliminary refining as waggon oil, nigrol, etc. It is, therefore, natural that such residuals shall be used for adulterating lubricating oils. A good mazout left after the distillation of kerosene has a viscosity above 6 and contains not more than 20 per cent. of tarry matter, and is therefore taxed, which makes its price too high for adulteration purposes. On the other hand, lubricating residuals (goodron) which contain more than 40 per cent. of tarry matters, are exempt from the tax; their viscosity and gravity may by the admixture of mazout be fixed at will, and for this reason this waste product is used extensively for the adulteration of the expensive heavy cylinder oils.

Cylinder oils are products obtained by a careful distillation of mazout and treatment with a large quantity of sulphuric acid. The heavier among them, such as viscosine, are the same. Cylinder oils which by heating have had their lighter fraction eliminated and were carefully refined with chemicals. Cylinder oils therefore cannot contain much tarry matter, which, in fact, does not exceed 9 per cent., and in case of certain brands prepared with particular care such as the Schibaieff oils, it is as low as 3·5 per cent., and only in very heavy oils does the percentage of tarry matter precipitated by the action of strong sulphuric acid reach 18 per cent., which, however, must be accepted as the outside limit. The percentage of tarry matter in mazout varies greatly, and depends on the quality of the crude oil and the method of distilling. For Baku mazout, obtained by the ordinary method of distilling which yields up to 30 per cent. of kerosene distillate, in its unadulterated state, the tests are:—

	Balakhany Crude.	Bebe-Aibat Crude.	Ramany Crude.
Specific gravity	0·908–0·912	0·915–0·920	0·905
Flash point	130–150°C	100–130°C	130–135°C
Percentage of tarry matter	20–25%	30–35%	20%
Viscosity at 50°C	6–7	5–7	5–6

Only in cases of the forced distillation of Balakhany crude, a mazout is received containing up to 40 per cent. of tarry matter. In lubricating oil, residuals, *i.e.*, goodron, and in some kinds of Grosny mazout, the content of tarry matter is as high as 60 per cent., with a specific gravity going up as high as 0·935, a flash of about 250° C. and a very high viscosity. These various kinds of residuals therefore offer a wide selection of materials for the adulteration of cylinder oils. By mixing lubricating oils with a corresponding kind of mazout, it is not difficult to prepare a mixture of any desired specific gravity, viscosity and even flash-point, which would be a substitute for a dark cylinder oil, the shortcomings of which as a lubricant easily escape notice. The only feature which sharply distinguishes this substitute from the genuine article is the percentage of tarry matter, which must be increased by the admixture of heavy residuals. The profits which this kind of adulteration offers are, however, so great that the adulterator can afford to part with a considerable portion of it in order to get the article accepted by large consumers. The extent of these profits is shown in the following figures:—

	Price per pood. Copecs.	Specific gravity.	Flash point.	Viscosity.	Percentage of tarry matter. Per cent.
Machine oil of Nobel Bros.	180	0·907	180° C	6·5	3
Special Baku mazout ..	56	0·927	130° C	8·3	47
A mixture in equal parts..	118	0·917	155° C (about)	7·5	25

The product thus obtained could be passed off also as a cylinder oil, the average price for which is 2·70 roubles, but for the percentage of tarry matter, the test for which, however, is not generally made by consumers on delivery of the oil. The high percentage of tarry matter in reality reduces the mixture to the level of ordinary mazout, as it completely destroys those valuable properties of the oil; for the attainment of which a considerable expenditure is incurred on distillation and refining.

It is clear from the above that as a result of the method of adulteration, in the case of transparent machine oils this can be detected by the specific gravity and viscosity and partly also by the flash point, which are lowered by the admixture of solar oil. For dark cylinder oils the detecting sign is the rise in the percentage of tarry matter, which must not exceed 18 per cent., and this limit can be reached only in oils with a specific gravity of not less than 0·925. The adulteration of machine oils yields comparatively but little profit on account of the limited extent to which it can be practised. The adulteration of cylinder oils, on the other hand, yields enormous profits and presents no difficulties. These conclusions are fully corroborated by the tests made by various samples of oils taken direct from the consumers. Whilst out of 30 samples of transparent machine oils tested, only one can be considered as of doubtful quality, out of 60 samples of cylinder oil at least 20 were found to be undoubted, and in most cases gross adulterations, and not only with heavy goodron but in some cases even with timber, tar and water. The means for combating this evil are in the hands solely of the consumers themselves, who must either buy their oils only direct from the big manufacturers or carefully test all lubricating oils delivered to them not only for specific gravity and flash point, but more particularly for the percentage of tarry matter.

(*To be continued.*)

CLASSIFIED IMPORTS INTO UNITED KINGDOM UP TO DECEMBER 28th, 1908.

IN GALLONS.

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Country.	Illuminating.		Lubricating.		Residuals.		Gas Oil. (Solar)		Benzine.		Fuel Oil.		Other Descriptions.		Totals.	
	Since Dec. 14.	From Jan. 1.	Since Dec. 14.	From Jan. 1.	Since Dec. 14.	From Jan 1.	Since Dec. 14.	From Jan. 1.	Since Dec. 14.	From Jan. 1.	Since Dec. 14.	From Jan. 1.	Since Dec. 14.	From Jan. 1	Since Dec. 14.	From Jan. 1.
Austria ...	—	—	6,000	102,350	18,420	190,800	—	—	—	—	—	—	—	11,250	24,420	308,400
Belgium ...	—	—	19,020	812,044	—	37,240	80,000	249,750	—	40	—	1,200	—	18,500	99.020	1,118,774
Canada ...	—	—	—	23,890	—	52,540	—	—	—	—	—	—	—	—	—	76,430
Dutch India.	—	—	—	—	—	—	—	—	—	21,496,770	—	—	—	—	—	21,496,770
Germany ...	314,490	6,363,410	76,440	1,724,706	—	8,470	—	—	—	670	—	—	—	8,900	390,930	8,106,157
Holland ...	—	360	160	25,290	—	—	—	—	—	1,469,600	—	4,820	85,670	160,630	85,830	1,660,700
Roumania ...	—	10,249,270	—	—	—	545,600	—	10,201,480	—	5,257,760	—	1,067,060	—	—	—	27,226,390
Russia ...	1,785,560	21,644,950	414,980	6.440,375	85,160	359,460	—	556,700	1,800	4,342 450	—	—	—	791,120	2,288,500	34,229,734
U.S.A. ...	8,748.120	130,614,170	1.893,430	39,204,720	3,700	1,150,045	1,053,230	53,312,550	885,420	6,093,090	1,267,000	6,010,590	36,000	1,157,520	13,886,900	237,542,685
Other Countries	—	1,266,100	240	68,415	—	40	—	—	150	568,050	—	1,560	—	1,090	390	1,905,255
	10,848,170	170,138,260	2,410,270	48,401,790	108,280	2,344,195	1,133,230	64,320,480	887,370	39,228,430	1,267,000	7,085,230	121,670	2,149,010	16,775,990	333,671,295

THE OIL PROSPECTS IN NORTHERN NEVADA.

AN UNFAVOURABLE REPORT.

Considerable interest will be centred in the preliminary report upon the oil prospects in Northern Nevada, which has just been issued by the United States Geological Survey. During the first half of the year just closed reports reached the Survey of oil discoveries in this region, and the Director was urged to send an expert into the field to determine their accuracy. Accordingly, Mr. Robert Anderson, an experienced geologist attached to the Survey, was sent to Nevada to make an investigation of the field west of Reno, of the region north of the bend of the Walker River, east of Wabuska, and in Smith Valley, north of Wellington, and in the small area, south of Palisade in North-eastern Nevada. The more important of Mr. Anderson's conclusions are now published, owing to the wide interest which his investigations has aroused, but it is expected that an elaborate account of the visit will be issued in due course.

He points out that the hills west of Reno to the north and south of the Truckee River are composed of a thick series of unconsolidated beds of sand, clay, diatomaceous earth, volcanic tuff and gravel, dipping eastward and north-eastward away from the mountains at angles of from 15 degrees to 35 degrees. These beds have been called the Truckee beds. They overlie andesite lava and older igneous and metamorphic rocks, such as form the mountains to the south-west and north-west, and were laid down upon them as sediments in a freshwater lake that covered much of their portion of Nevada during middle tertiary time, when the region was much less mountainous than now. Subsequent to the deposition of these beds, mountain-making forces have produced the surrounding mountains and have tilted the beds up into their present attitude, beside fracturing them throughout with an intricate system of dislocations. Later periods have witnessed likewise a great amount of erosion of the mountains and hills, the presence of other lakes, and the deposition of a comparatively thin covering of sand and coarse gravel over most of the hill and valley area around Reno.

If petroleum were present it would with little question have to be considered as originating in the Truckee beds, and there, if anywhere, it would be stored. The examination of these beds has resulted in the conclusion that no paying quantity of petroleum, if any at all, will be found in them, for the following principal reasons :—

First—No indication of the presence of oil has been discovered in the beds at the surface, although they are tilted and the succession exposed as a whole in such a way that some of the oil, if any were present, could hardly fail to escape to the surface and leave a trace. Moreover, the completely permeating system of small fault fractures would lend further avenues of escape. The supposed indications of oil that have been reported by previous observers are iron, manganese and vegetable stains in certain strata, and occasionally on the surface of standing pools of water in the vicinity.

Second—The structure of the beds is that of a monocline of considerable dip, at the base of which the oldest beds of the formation are exposed overlying the volcanic rocks of the mountains. The summit of the anticlinal fold, which probably once arched over toward the west into the south-west dipping strata of the Verdi region, and which would have afforded the best conditions for the accumulation of oil, has been completely removed by erosion. The tilted, erosionally truncated, and intricately faulted condition of the strata would favour the diffusion and escape of the oil, if any were present, rather than its accumulation in large quantities.

The examination was confined chiefly to the basin-like valley in which the Yerington Oil and Gas Co. is drilling a well, north of the great northerly bend of the Walker River, and about eight miles eastward from Wabuska. This valley is fairly typical of a number of similar basins in this region that form elbows in the valley of the Walker River.

The basin is surrounded by mountains, formed chiefly of lava and volcanic fragmentary matter, and has a fairly level floor with surface covering of loose sand and compact clay. Horizontal strata of unconsolidated sand and clay, and detritus from the mountains, have accumulated in this basin within a comparatively recent (Quarternary) period of geological time, probably nowhere to a depth exceeding a few hundred feet. The shallow and local nature of this filling is indicated by the fact that little knolls of the lava that forms the bed-rock of the valley, occasionally rise above the floor, in some cases very near the river. The chance of finding oil in this vicinity must be considered very slight for the reason that there is no evidence of the presence of any strata that might be looked upon as probable oil producers.

The portion of Smith Valley that was visited was the northern part, extending from a line drawn eastward across the valley from Hinds' Hot Springs northward to Buckskin. The mountains on the east of Smith Valley are formed chiefly of much altered limestone intruded by granite and rhyolite and capped with andesite lava; those on the west chiefly of granite and porphyritic igneous rocks. The valley itself contains a filling of horizontal lake beds of unconsolidated clay and sand which are exposed in low bluffs at the edge of a terrace on the side of the valley. These beds probably belong to the late tertiary period, when a lake must have covered the valleys of this region. The beds do not date so far back as those in the vicinity of Reno. They are locally overlain by talus and alluvial fan deposits at the base of the mountains, and by a comparatively thin coating of recent sand and clay deposits that have been laid down over the floor of the basin. No definite estimate can be made of the depths of the sediments in this valley, but it may be said that they are probably underlain at a depth of not very many hundred feet by the volcanic rocks or older bed-rock series. The geologic character of the region is not such as to favour its selection as a possible petroleum producer.

A brief examination was made of an asphalt prospect in North-eastern Nevada, about 15 miles south of Palisade, near the foot of the mountains east of Maples' Ranch on the Eureka and Palisade Railroad. At this locality a lustrous black asphaltite resembling in character the variety called Impsonite occurs in veins and stringers along fracture planes and as sheets along bedding planes in well indurated calcarous and clay shales and sandstone beds of carboniferous age. The lenses of asphalt are variable in size and occurrence. The greatest width of any ore observed in the prospect openings is about 18 inches. The asphalt cannot be traced on the surface of the ground, but similar material occurs at different points several miles distant, and it is probable that the zone of fracturing in which it has collected has considerable extent.

The sandstone shale and conglomerate of this vicinity are tilted towards the south-west at angles from 50 degrees to 70 degrees on the average, and have undergone considerable disturbance. Owing to the great age of the beds, this disturbed condition, and the consequent opportunities for the escape of the petroleum content which may have been at one time present, it is likely that almost all, if not all, such oil has long since escaped or become altered into the derived form of asphalt. Further investigation should be made of this region south of Palisade, however, before such a conclusion should be considered as applying to any area except the immediate vicinity of the asphalt prospect mentioned.

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THE PETROLEUM TRADE OF TSINGTAU.

The British Consul, in his report upon the trade of Tsingtau during 1907, says that the principal interest of the imports seems to be centred in kerosene oil, and it seems probable that Tsingtau will soon become the distributing point for the province. Three companies are represented here:—The Standard Oil Co., the Shanghai Langkat Co., and the Asiatic Petroleum Co., Ltd. The last named is a British concern, with headquarters in London. The trade done last year was as follows:—Standard, 400,000 cases; Langkat, Dragon, 150,000 cases; Asiatic Petroleum Co., Ltd., 111,000 units. The Standard Oil Co. and the Langkhat Co. import in cases, the Asiatic Petroleum Co. in bulk, in tank steamers chartered from the "Shell" Co. The tank installation of the Asiatic Petroleum Co. was completed in August, 1907, with two tanks of 2,500 tons each. Tins are made upon the premises, but no cases are used. The Standard Oil Co. is erecting a tank installation in close proximity to that of the Asiatic Petroleum Co., with two tanks of 4,000 tons each and a tin factory, which should be finished in July this year. There is very little local trade, for with the exception of a few thousand cases distributed by junk annually through the villages bordering the Bay of Kiaochou itself and a few of the near coast towns, the whole trade goes *via* the railway to the various towns *en route* to Chinan Fu. The Asiatic Petroleum Co. is now running tank cars along the railway to serve tank depôts.

PETROLEUM CARRIAGE AND STORAGE IN THE STRAITS SETTLEMENTS.

An ordinance to consolidate and amend the law relating to the carriage and storage of petroleum and other inflammable oils and liquids in the Straits Settlements has recently been issued. The ordinance, which is to come into operation on a date to be fixed by the Governor-in-Council, repeals the "Petroleum Ordinance, 1896," and the amending Ordinance of 1903. At the same time, it is provided that petroleum shall only be imported at such ports or places as may be appointed by the Governor-in-Council, and that vessels having on board petroleum which has a flashing point below 73° F. shall not enter the limits of any port, without the permission of the port officer, or anchor at any place other than such as is declared to be an anchorage for ships carrying petroleum. Notice of the arrival of vessels carrying petroleum is to be given to the port officer, and no petroleum may be landed until a permit therefor has been granted by him. It is also provided that any vessel carrying petroleum as cargo (whether it is intended to be discharged or transhipped or is merely passing through a port, or has been loaded in the port) shall, on being so ordered by the port officer, proceed to such anchorage as he may direct, and, further, that petroleum may not be carried as deck cargo in any steamship, except under certain specified conditions. The Ordinance also lays down regulations respecting the transport and storage of petroleum, etc., within the Colony of the Straits Settlements.

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AMERICAN PARAFFIN WAX EXPORTS DURING OCTOBER.

The exports of American paraffin wax during October were as under, the figures being given in pounds:—

Exported to—	1907.	1908.
United Kingdom..	9,294,161	8,751,317
Belgium	107,370	15,748
France	77,422	28,903
Germany	509,770	176,553
Italy	2,191,964	600,368
Netherlands	759,809	249,135
Other European Countries ..	222,584	435,125
Central American States and British Honduras	78,385	164,100
Mexico	1,082,136	1,012,491
South America	67,946	36,255
Japan	3,154,019	—
British Australasia	104,491	262,279
Other Asia and Oceanica ..	4,419	543,713
British Africa	474,237	242,283
All Other African Countries ..	418,890	597,424
Other Countries	3,154	28,499

BORE HOLES FOR OIL
Contracted for by
JOHN M. THOM,
Canal Works,
Patricroft, MANCHESTER.
CONTRACTOR TO H.M. GOVERNMENT.

The American Oil Market.

New York, Week ended Dec. 12th.

Development work is still active in many of the fields east of the Mississippi River, operators generally endeavouring to take advantage of the favourable conditions to carry out as much of their prospective work as possible before the winter obstacles are experienced. In the fields yielding the highest grades of crude, West Virginia was well in the lead in the week's returns, the new daily production amounting to 1,355 barrels from 23 successful oil wells. The best results were experienced in Lincoln county, says the *Oil, Paint and Drug Reporter*, and while the producers are not of unusual capacity, they are brought in with a degree of regularity that is likely to sustain operations well into the winter. Jefferson and Columbiana counties are the most active, and many of the efforts have been in the direction of broadening the producing area, and a promise of an extension to the Shallow sand development of the Alliance pool in Columbiana county was said to have been found in a completion to the north-east that flowed 100 barrels the first 21 hours. This formation is maintaining a gratifying record, a late report placing the output at 750 barrels per day. The Clinton line development of Fairfield county was again to the front with a producer, the capacity of which was placed at 200 barrels per day. Little of interest is to be noted in the Lima field of North-western Ohio and Indiana. A slight gain in new production in the latter section is recorded, but a more than counterbalancing decline is indicated in the returns from North-western Ohio. Of the 33 completions in the entire Lima field for the week, but one duster was experienced in the Ohio end. Operations in Kentucky have been quickened by the more favourable weather conditions of the last two weeks, the centre of activity being Wayne county, which contains more than one-half of the total number of rigs. Prospecting work has been extended to some of the districts which have attracted almost no attention for a year or more. Wayne county continues to furnish the best results. A 25-barrel producer was reported at Stubensville. In the upper part of the State a wildcat strike in Bath county, showing for a 20-barrel well, was the most interesting development. Crawford county commands the greater share of attention, so far as drilling is concerned, but the results experienced in Lawrence county have been of a more creditable character. Strenuous efforts are being made by the principal operative company in Illinois to provide a more commensurate outlet for crude. Our Mid-Continent field correspondent writes of the urgent need for relief from the congestion of crude stocks there, the extent of oil in storage being established at 51,500,000 barrels. An adequate outlet, it is believed, could be afforded if the proposed extension of the pipe line system to the Gulf of Mexico were built, but the only difficulty in the way of carrying this plan into execution is said to be an impracticable restriction by the Interior Department of Washington. Interest in field operations centres in the North Glenn pool, where large producers are regularly brought in, and in the Muskogee district, which furnishes occasional wells, yielding 1,000 barrels.

Refined and Products.—The continued activity in the export movement contributes the most interesting development of the week in the local market for refined. The presence of the tank fleet has been chiefly instrumental in the heavy outlet of refined, 12,700,000 of the week's total of 16,810,310 gallons having been shipped in bulk. The aggregate for the former week reached 13,848,940 gallons. Chartering for forward account has also been more active, and additional engagements reported during the week have comprised 160,000 cases for Japan or Corea, January, and 135,000 cases for the same destination, January-February, Philadelphia loading, and 160,000 cases for China, February shipment from New York. Domestic trading has been of well-sustained proportions, incident to the season. Nothing of interest is to be noted concerning values, the market continuing firm at lately prevailing figures.

CLOSING QUOTATIONS.

Crude at the Wells.

The quotations for oil represented by credit balances were :—

	Week ended Dec. 12. 1907.	Week ended Dec. 12 1908.
Pennsylvania	$1·78	$1·78
Tiona	1·78	1·78
North Lima	0·94	1·04
South Lima	0·89	0·99
Indiana	0·89	0·99
Illinois, heavy, below 30 deg. ..	0·60	0 60
Kansas and Indian Ter., 32 deg. and above	0·41	0·41
Heavy	0·28	0·28
Humble, Tex.	0·77	0·55
Saratoga	0·75	0·53
Sour Lake, Tex.	0·79	0·53
Jennings, La.	0·74	0·55
Canadian Oil :—		
Petrolia	1·34	1·44
Oil Springs, less pipeage	1·41	1·51

Refined—For Export.

In cents.		Week ended Dec. 12. S.W. 110 test.	W.W. 150 test.
Barrels, cargo	per gal.	8·50	@10·00
Philadelphia	..	8·45	@ 9·95
Bulk, New York	..	5·00	@ 6·50
Bulk, Philadelphia	..	4·95	@ 6·45
Cases, New York	..	10·90	@12·40
Cases Philadelphia	..	10 85	@12·35

Refined in Cases—110 Fire Test.

	Week ended Dec. 7. 1908.	Dec. 12. 1908.
3,000 to 10,000	11·05	11·05
1,000 to 3,000	11·10	11·10

Refined—Jobbing Lots.

In barrels, pkgs. included.

		Week ended Dec. 7.	Dec. 12.
120 fire test, S.W. ..	in barrels	12	12
130 fire test, S.W. ..	.. ..	12½	12½
150 fire test, W.W. ..	.. ..	13½	13½
In bulk from tanks	.. ..	10	10
300 fire test	.. ..	13¼@14	13¼@14

Naphtha and Gasolene.

	Week ended Dec. 7.	Dec. 12.
Naphtha, V. M. and P. deod. ..	14·00	13·00
Gasolene, 86 deg.	23·00	24·00

Pennsylvanian Oil Runs from Dec. 3rd to Dec. 9th were :—Dec. 3rd, 170,570* ; Dec. 4th and 5th, 217,605* ; Dec. 6th, 104,924* ; Dec. 7th, 185,760 ; Dec. 8th, 85,957 ; and Dec. 9th, 84,411.

* Includes Illinois Oil.

The Deliveries of Pennsylvanian Oil from Dec. 4th to Dec. 10th were :—Dec. 4th, 283,339* ; Dec. 5th and 6th, 392,585* ; Dec. 7th, 185,888* ; Dec. 8th, 197,994* ; Dec. 9th, 175,063* ; and 10th, 166,022*.

* Includes Illinois Oil.

Clearances for the Week.

During the week ended Dec. 11th and since Jan. 1, the clearances of petroleum, in gallons, from the port of New York, were as follows :—

	Week.	Year.	1907.
Refined	16,810,310	571,502,938	515,166,855
Crude	—	39,757,420	1,977,479
Naphtha	208,320	14,160,430	10,873,690
Residuum ..	—	9,409,995	814,160

Export Statistics.

The total exports from the port of New York and from the United States have been :—

	Gallons.
From New York, week ended Dec. 11th ..	22,413,747
Total from New York, from Jan. 1st, 1908 ..	827,857,901
Same period last year	678,455,567
Increase	149,402,334
From United States, week ended Dec. 11th	34,771,997
Total from United States, since Jan. 1st, 1908	1,472,735,805
Same period last year	1,247,046,869
Increase	225,688,936

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The "Review" Shipping List.

January 1, 1909.

*(The following abbreviations are used in this table:—*L. Left; P. Passed; Arr. Arrived; Sp. Spoken; Tr. Trading.)

Vessel.	From.	For.	Latest Date and Position.
ALCHYMIST	Selzaete	Lisbon	L. Dec. 26
ALICE ET ISABELLE (Fr. bq.)	New York	Rouen	Arr. Dec. 16
AMERICAN	Puerto Mexico	Del. Break.	L. Dec. 12
APPALACHEE	Barrow	New York	L. Dec. 20
APSCHERON	Manchester	Batoum	P. Eastham, Dec. 29
ARAL	Tyne	Philadelphia	P. Butt of Lewis, Dec. 17
ARAS	Baltimore	Belfast	L. Dec. 20
ASHTABULA	Shanghai	San Francisco	Arr. Dec. 22
ASTRAKHAN	Tyne	Philadelphia	L. Dec. 27
AUGUSTA	London	Puerto Mexico	Arr. Dec. 11
AUGUST KORFF	Grangemouth	Philadelphia	Arr. Dec. 25
AUREOLE	Ymuiden	Galveston	At Norfolk (Va.), Dec. 27
BAKU STANDARD	Tyne	Batoum	S. Constant'ple, Dec. 21
BALAKANI	Tyne	Batoum	L. Dec. 24
BATOUM	Aroe Bay	Singapore	Arr. Dec. 19
BAYONNE	Granatello	Batoum	S. Constant'ple, Dec. 25
BEACON LIGHT	Rouen	Newport	Arr. Dec. 12, in Port, Dec. 29
BLOOMFIELD	London	Amsterdam & New Orleans	Sd. Norfolk (Va.), Dec. 27
BORJOM	Alexandria	Batoum	P. Constant'ple, Dec. 17
BRILLIANT	Philadelphia	Gothenburg	P. Del. Break., Dec. 15
BROADMAYNE	Tyne	Kustendje	At Malta, Dec. 30–31
BULLMOUTH	Tyne	Batoum	P. Gibraltar, Dec. 19–20
BULYSSES	Taketoyo	Singapore	L. Dec. 13
BURGERMEISTER PETERSEN	Tyne	New York	P. Dunnet Head, Dec. 17
BUYO MARU	Sabine Pass	Yokohama (via Suez)	At Port Said, Dec. 26
CALCUTTA (Br. bq.)	San Francisco	Tsingtan	L. Nov. 11
CAPTAIN A. F. LUCAS (with S.O. Barge 95)	New York	Flushing	400 miles E. Sandy Hook, Dec. 17
CARDIUM	Soesoe	Hamburg	Arr. Dec. 26
CARPATHIAN	Port Arthur (Texas)	Hamburg	P. Cape Henry, Dec. 18
CAUCASIAN	Philadelphia	London	P. Del. Break., Dec. 15
CHARLOIS	New York	Bremerhaven	Arr. Dec. 29
CHESAPEAKE	Messina	Kustendje	L. Dec. 26
CHESTER	Antwerp	New York	Off the Wight, Dec. 18
CITY OF EVERETT (with S.O. Barge 94)	New York	Philadelphia	L. Dec. 14
CIUDAD DE REUS	Sulina	Rouen	L. Dec. 28
CLAM	Batoum	—	P. Perim, Dec. 10
CLEMATIS	Fernandina	Rotterdam	P. Dover, Dec. 30
COALTAR (s.)	Newport	Port Talbot	Arr. Dec. 12, in Port, Dec. 22
COL. E. L. DRAKE	—	—	Coasting U.S. and Pacific
COWRIE	Batoum	Bombay	P. Aden, Dec. 18
CUYAHOGA	San Francisco	Moji	L. Dec. 10
CYMBELINE	Penarth	Philadelphia	Arr. Dec. 23
CZAR NICOLAI II.	Hamburg	Batoum	P. Sagres, Dec. 29
DAGHESTAN	Hamburg	Batoum	S. Cuxhaven Rds. Dec. 23
DAKOTAH	San Francisco	Hong Kong	Arr. abt. Dec. 23
DELAWARE	Manchester	Philadelphia	P. Fastnet, Dec. 22
DERBENT	Antwerp	Batoum	P. Tarifa, Dec. 28
DEUTSCHLAND	New York	Cette	L. Dec. 17
DIAMANT	Tyne	New York	Arr. Dec. 26
EDWARD DAWSON	Hull	New Orleans	L. Dec. 29
ELAX	Balekpappan	Singapore	Arr. Dec. 28, for Palembang
EL LOBO	Tyne	Port Arthur (Texas)	P. Dunnet Head, Dec. 7
ENERGIE	New York	Danzig	L. Dec. 24
ERIVAN	Genoa	Batoum	L. Dec. 25
ETELKA	Batoum	Fiume	Arr. Dec. 22
EUPLECTELA	Rotterdam	Tyne	Arr. Dec. 28
EXCELSIOR	Copenhagen	Hamburg	Arr. Dec. 17, in Port, Dec. 25
FRANCE MARIE (French bq.)	Corunna	Philadelphia	L. Nov. 25
GEESTEMUNDE	Tyne	New York	Arr. Dec. 25
GENESSE	Philadelphia	London	Arr. Dec. 30
GEORGIAN PRINCE	Barry	Novorossisk	Arr. Dec. 26
GOLDMOUTH	Singapore	Europe (via Cape)	P. Cape Agulhas, Dec. 28
GUTHEIL	New York	Konigsberg	At Pillau, Dec. 22
HAINAUT (Du. sh.)	Antwerp	New York	Off the Wight, Dec. 19
HARRY WADSWORTH	Hull	New Orleans	P. Lizard, Dec. 14
HELIOS	Philadelphia	Bordeaux	P. Reedy Island, Dec. 10
HERMIONE	Avonmouth	Kustendje	Off Barrry Island, Dec. 24
HESPERUS	New York	Hamburg	Arr. Dec. 23, in Port, Dec. 25
HESPERUS	Honfleur	Tyne	Arr. Nov. 25
HOTHAM NEWTON	Batoum	Antwerp	P. Sagres, Dec. 24
HYRCANIA	Barry	Batoum	P. Gibraltar, Dec. 20
IOANNIS COUTZIS	Antwerp	Batoum	L. Dec. 21
IROQUOIS (towing barge Navahoe)	London	New York	L. Dec. 28
J. B. AUG. KESSLER	Singapore	Europe	L. Dec. 13
JAMES BRAND	Emden	Galveston	Sd. Bermuda, Dec. 29
JOYO MARU	London	Cardiff	Arr. Nov. 22, in Port, Dec. 29
JULES HENRI (French bq.)	Marseilles	Philadelphia	L. Dec. 1
KURA	New York	Foynes	L. Dec. 18
LA CAMPINE	Antwerp	New York	P. Scilly, Dec. 13
LA FLANDRE	Philadelphia	Ghent	P. Dover, Dec. 29
LA HESBAYE	Antwerp	New York	P. Scilly, Dec. 22
LACKAWANNA	New York	Savona	At New York, Dec. 19
LANSING	Pt. San Luis	San Francisco	Arr. Dec. 13
LE COQ	Rouen	New York	P. Havre, Dec. 26
LOUTSCH	Batoum	Odessa	L. Dec. 1
LUCERNA	Rouen	Novorossisk	L. Dec. 11
LUCILINE	Batoum	Rouen	Sd. Constant'ple, Dec. 29
LUMEN	Novorossisk & Thameshaven	Ghent	At Flushing, Dec. 29
LUTETIAN	Rouen	Philadelphia	L. Dec. 29
LUX	Philadelphia	Alicante	L. Dec. 27
MAKKAVEI	Cette	Batoum & Odessa	P. Dardenelles, Dec. 11
MANHATTAN	Granatello	Batoum	At Malta, Dec. 23–24
MANNHEIM	Philadelphia	Hamburg	L. Dec. 20
MARGARETHA	Hamburg	Genoa	Arr. Dec. 25
METEOR	Odessa	Vladivostock	At Manila, Dec. 1
MEXICAN PRINCE	Philadelphia	Stettin	L. Dec. 23
MIRA	Calais	Blyth	Arr. Dec 19
MUREX	Singapore	Port Natal & Campana	Arr. River Plate, Dec. 17
NARRAGANSETT	New York	London	Abm. Dungeness, Dec. 31
NEWYORK	Rotterdam	New York	P. Nantucket, Dec. 30
NIAGARA	San Francisco	Shanghai	L. Dec. 1
OBERON	Rangoon	U.K.	At Suez, Dec. 30
OCEAN	New York	Flushing	Arr. Dec. 28

Vessel.	From.	For.	Latest Date and Position.
OILFIELD	New York & Bordeaux	Tyne	Arr. Dec. 10
OKLAHOMA	London	Port Arthur (Texas)	Arr. Dec. 20
ORIFLAMME	Philadelphia	Cette	Sd. Halifax, Dec. 16
OTTAWA	Philadelphia	Manchester	Arr. Dec. 30
OURAL	Barcelona	St. Louis (Rhone)	L. Dec. 28
PAUL PAIX	Kustendje	Calais	Arr. Dec. 27
PAULA	New York	—	L. Dec. 25
PECTAN	Port Arthur	Avonmouth	Arr. Dec. 28, in Port, Dec. 29
PENNOIL	Philadelphia	Hamburg	In Downs, Dec. 28
PETROLEINE	Tyne	Philadelphia	P. Cape Race, Dec. 28
PHOEBUS	New York	Hamburg	Arr. Dec. 25
PINNA	Honololu	Yokohama	L. Dec. 14
POTOMAC	Avonmouth	Philadelphia	P. Fastnet, Dec. 18
PROGRESSO ARGENTINA (Ar. bq.)	Port Arthur (Texas)	Buenos Aires	Arr. Aug. 14
PROMETHEUS	New York	Rotterdam	L Dec. 20
PRUDENTIA	Sunderland	Hull	Arr. Nov. 4, in Port, Dec. 9, repairing
PURELIGHT	Philadelphia	Dover	P. Lizard, Dec. 28
QUEVILLY (Fr. bq.)	Rouen	New York	Off Cherbourg, Nov. 12
RENDOVA (Br. bq.)	Seville	Philadelphia	L. Dec. 6
RION	Kustendje	Antwerp	S. Constant'ple, Dec. 21
ROCK LIGHT	Tyne	Kustendje	P. Gibraltar, Dec. 27
ROMANY	Balekpappan	Bombay	Sd. Singapore, Dec. 8
ROTTERDAM	Amsterdam	New York	Arr. Dec. 25
ROUMANIAN	Tyne	Port Arthur (Texas)	P. Lizard, Dec. 22
RUSSIAN PRINCE	Tyne	Cuba	P. Dungeness, Dec. 19
SALAHADJI	Amoy	Saitozaki	L. Dec. 13
SAN CRISTOBAL	London	Grimsby and Puerto Mexico	At Southampton, Dec. 12
SAN IGNACIO DE LOYOLA (Sp. bq.)	New York	Pasages	In Port, Dec. 7 (for U.S.)
SANTA MARIA	San Francisco	Taltal	Sd. Port Harford, Nov. 28
SANTA RITA	—	—	At San Francisco, Dec. 23
SARANAC	Calcutta	Singapore	L. Dec. 3
SAXOLEINE	Tyne	Philadelphia	P. Dunnet Head, Dec. 20
SCHUYLKILL	New York	Batavia	Sd. St. Vincent, (C.V.), Dec. 3
SEMINOLE	New York	Turk's Island	In Wireless Com., Sandy Hk., Dec. 18
SERVIAN	Sunderland	Port Arthur (Texas)	P. Dunnet Head, Dec. 25
SNOWFLAKE	Tyne	Philadelphia	Arr. Dec. 28
SOYO MARU	Port Arthur (Texas)	Yokohama	Cld. Singapore, Dec. 1
SPONDILUS	Philadelphia	Calcutta	At Port Said, Dec. 25-26
STANDARD	Hamburg & Tyne	New York	Arr. Dec. 24
STROMBUS	Rotterdam	—	P. Gibraltar, Dec. 29
SULTAN VAN LANGKAT	Palembang	Nagasaki	Cld. Singapore, Nov. 8
SUN	Philadelphia	Sabine Pass	Arr. Dec. 13
SUNLIGHT (Br. bq.)	Philadelphia	Dunkirk	Arr. Nov. 24
SURAM	Tyne	Port Arthur	L. Dec. 1
SUWANEE	Philadelphia	Hull	Arr. Dec. 27
SVIET	Alexandria	Batoum	S. Constant'ple, Dec. 14
TAMARC	Barrow	New York	At Fayal for coal, Dec. 23
TELENA	Sabang	—	L. Dec. 13
TEREK	Philadelphia	Manchester	L. Dec. 29
TEXAS	Avonmouth	Port Arthur	Arr. Dec. 7
TIFLIS	Philadelphia	Manchester & Thameshaven	Arr. Dec. 28
TIOGA	Philadelphia	London	L. Dec. 17
TONAWANDA	San Francisco	Haiphong	Sd. Saigon, Nov. 28
TROCAS	Tientsin	Tsingtan	L. Dec. 10
TUSCARORA	Hong Kong	San Francisco	Arr. Dec. 21
VEDRA	Palembang	Kobe	L. Dec. 20
VILLE DE DIEPPE (Nor. bq.)	Rouen	Philadelphia	L. Nov. 23
VOLUTE	Samboe	Calcutta	Arr. Dec. 13
WASHINGTON	Bengkalis	Nordenhamn	Off Ushant, Dec. 28
WASHTENAW	San Francisco	Seattle	L. Dec. 4
WEEHAWKEN	Alexandria	Kustendje	Arr. Dec. 21
WILLKOMMEN	Philadelphia	Stockholm	Arr. Dec. 24
WINNEBAGO	San Francisco	Coo Bay	L. Dec. 8

Latest Market Intelligence.

LONDON OIL MARKET.

Supplied by Messrs. Benjamin & Gee, 31, St. Mary Axe, E.C.

Jan. 1st, 1909.

The price of Refined Petroleum has risen ¼d. per gallon, excepting the Roumanian, which remains as before. The latest quotations are:—Russian 6½d. to 6¾d.; American, 7d. to 7¼d.; Water White, 8d. to 8¼d.; Roumanian, 7d.

LUBRICATING OILS

are unchanged as follows:—

American pale, £6 10s. to £10 10s.
American dark cylinder, from £8.
American filtered cylinder, from £11 5s.
No. 1 Russian, for Spot, £8 10s.

TURPENTINE.

American Turpentine has been firm the last few days, and is quoted for Spot 29s., and but 6d. to 9d. more for the first four months:—May-August, 30s. 6d., and July-December, 31s. 6d.

LIVERPOOL OIL MARKET.

Jan. 1st.

Refined oils are quiet, and sellers quote 6¾d., for Russian, Galician or Roumanian; and 7¼d. to 8¼d. per gallon for American.

Petroleum Spirit continues at 1s. 0d. to 1s. 1½d. per gallon for American deodorised, according to quality on the spot.

LATEST AMERICAN PRICES.

New York, Dec. 31st.

Refined, in cases, is steady at 10·90; Standard White, 8·50; Credit balances, 1·78c.

Philadelphia, Dec. 31st.

Standard White is now quoted at 8·45.

RUSSIA.

Baku, Dec. 28th.

The Baku oil market is firm. Crude oil, spot, 18⅞ copecs per pood. Residuals, 19⅜ copecs. Kerosene, in ships, 25¼ copecs, in waggons, 25½ copecs.

BELGIUM.

Antwerp, Dec. 29th.

The petroleum market is firm. Price of Standard White, spot, 22 francs per 100 kilos; January, 22¼.

FRANCE.

Paris, Dec. 24th.

Illuminating oil is quoted in bulk, in whole tank waggons, 24 francs per hectolitre; spirit, 33·75 francs per hectolitre. Special white oil, in barrels or cans, 32 francs per hectolitre.

GERMANY.

Hamburg, Dec. 24th.

The kerosene market is firm. The price of American Standard White is 7.70 marks per 50 kilos.; Galician, 7.35 marks.

HOLLAND.

Amsterdam, Dec. 24th.

The petroleum market remains firm. American Standard White, spot, 12·20 florins per 100 kilos.

ROUMANIA.

Dec. 30th.

	Francs.
Crude oil from different fields, including pipe line charges, per 100 kgs.	4·50–4·70
Refined oil, exclusive of taxes, ex. refinery	8·70
Benzine, 717–720, including taxes	20·00
Benzine, 750–760	15·00–15·50
Residuals in tank waggons, at refinery	4·30– 4·35
Paraffin	120·00

Prices for Export.

Refined oil, f.o.b., per 100 kgs.	7·50–8·00
Benzine, sp. gr. 0·710–0·715, f.o.b.	17·00–18·00
,, sp. gr. 0·715–0·720 ,,	15·00-16·00
,, sp. gr. 0·730–0·740 ,,	10·00–11 00
,, sp. gr. 0·745–0.755 ,,	9·00-10·00

INDIA.

Bombay, Dec. 18th.

The market is still without change.

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IMPORTS of PETROLEUM into UNITED KINGDOM

Specially prepared for this Journal by the Custom House.

FOR THE WEEK ENDED 21ST DECEMBER, 1908—

Date.	Port and Importers.	Description.	No. of Gals.	Port Whence.
Dec.	LONDON—			
15	J. Harrison	Lub.	210	Antwerp
15	Ragosine and Co.	,,	200	,,
15	Mordaunt Bros.	,,	40	Hamburg
15	International Transport Co.	,,	240	Antwerp
15	London & India Docks Co.	,,	3 800	New York
15	Fielder, Hickman and Co.	,,	11,600	,,
15	Bowring Petroleum Co.	,,	2,160	,,
15	Anglo-American Oil Co.	,,	6,600	,,
15	Worthington and Boler	,,	5,000	Philadel.
15	A. Brown and Co.	,,	14,080	,,
15	J. W. Baker	,,	2,520	,,
15	,,	,,	1,210	,,
16	A. Duckham and Co.	,,	80	Stockholm
16	Mordaunt Bros.	,,	8,300	New York
16	H. Finckler and Co.	Resid.	12,440	Fiume
16	Mercantile Lighterage Co.	Lub.	3,750	New York
16	Lubricating & Fuel Oils, Ld.	,,	2,670	Philadel.
17	J. Harrison	,,	360	Antwerp
17	Van Dam and Co.	Tar Oil	1,640	Rotterdam
17	E. A. Gibson & Co. (Timsah)	Gas	80,000	Antwerp
17	T. H. Lee	Lub. Gr.	190	Hamburg
17	J. Harrison	,,	240	Antwerp
17	H. Finckler and Co.	Resid.	5,980	Fiume
17	Page, Son and East	Lub.	120	Antwerp
17	Produce Brokers' Co.	,,	5,440	Philadel.
17	Scott's Wharf	,,	2,000	,,
17	Anglo-American Oil Co.	,,	66,000	,,
18	,,	,,	28,000	,,
18	Worthington and Boler	,,	4,400	,,
18	Ragosine and Co.	,,	2,390	,,
18	Mercantile Lighterage Co.	,,	1,250	,,
18	,,	,,	6,500	Baltimore
18	Petroles de Grosyni (Lumen)	Spirit	135,450	Novorossisk
18	W. H. J. Alexander	Lub.	10,400	Hamburg
19	A. Brown and Co.	,,	2,400	Philadel.
19	London and India Docks Co.	,,	3,500	Hamburg
19	Burt, Boulton and Heywood	Naph.	120	Bordeaux
19	G. Haller and Co.	Lub.	160	Antwerp
19	British and Foreign Wharf	,,	500	,,
19	Anglo-American Oil Co. (Suwanee)	Naph.	885,420	Philadel.
21	G. Jennings	Lub.	1,210	,,
21	Scott's Wharf	,,	2,000	New York
21	T. H. Lee	Lub. Oil and Gr.	1,230	Hamburg
21	Page, Son and East	Lub. Oil and Gr.	1,300	Antwerp
	LIVERPOOL—			
15	Meade-King, Robinson & Co.	Lub.	3,000	New York
15	,, ,,	,,	18,270	Baltimore
15	A. Hopps and Sons	,,	13,280	,,
15	,,	Lub. Gr.	420	,,
15	D. Owen and Son	Lub.	2,790	New York
15	G. B. Taylor	,,	200	,,
18	Jas. Light and Sons	Lub.	2,600	Baltimore
18	Meade-King, Robinson & Co.	,,	15,600	Hamburg
23/11	,, (E. Dawson)	Gas	19,600	Pt. Arthur
9/11	,, (H. Wadsworth)	,,	90,100	,,
19	W. Gibson and Sons	Lamp	2,050	Boston
21	Vacuum Oil Co.	Lub.	7,880	New York
21	C. C. Wakefield	Lub. Gr.	500	Antwerp
	BRISTOL—			
15	First Anglo-Russian Oil Co.	Lub.	260	,,
15	Pickfords	,,	500	,,
15	Heaton and Co.	Lub. Gr	160	,,
15	W. G. Clarke	Lub.	720	,,
17	Colthurst and Harding	,,	480	,,
18	E. Stock and Sons	,,	1,000	Hamburg
18	Pickford's, Ltd.	Lub. Oil and Gr.	340	,,
21	H. Pritchard and Co.	Lamp	2,090	New York
21	J. and R. Bush	Lub.	32,800	,,
21	H. R. James and Son	,,	3,200	,,
21	British Pet. Co. (Hermione)	Lamp	1,479,000	Philadel.
21	,, ,,	Gas	469,000	,,
	CARDIFF—			
17	Bristol Steam Nav. Co.	Lub. Gr.	400	Antwerp
19	,,	Lub.	200	Hamburg
	GOOLE—			
18	Goole Steamship Co.	,,	240	,,
	HULL—			
15	Wilsons and N.E. Co.	,,	120	Antwerp
15	T. Wilson, Sons and Co.	,,	44,080	New York
15	W. Gilyott and Co.	,,	9,800	,,
16	Wilsons and N.E. Co.	,,	240	Hamburg
16	,,	,,	120	Antwerp
16	Hull & Netherlands SS. Co.	Tar Oil	2,400	Rotterdam
17	Wilsons and N.E. Co.	Lub.	3,720	Hamburg
17	,,	,,	80	Antwerp
19	W. Gilyott and Co.	,,	10,000	New York
19	T. Wilson, Sons and Co.	,,	2,000	Reval
	MANCHESTER—			
15	D. Currie and Co.	,,	200	Hamburg
15	Wackerbarth, Holt and Co.	,,	2,580	Boston
15	Crew, Levick and Co.	,,	23,610	Philadel.
15	,,	M. Colza	1,360	,,
15	J. T. Fletcher and Co.	Lub. Oil and Gr.	140	Antwerp
15	Geo. B. Taylor	Lub.	70,200	New York
16	F. Woodhill and Co. (Hyrcania)	Lamp	1,785,560	Batoum
16	Meade-King, Robinson & Co. (Frisia)	,,	295,000	Hamburg
16	Schofield and Co.	Lub.	500	,,
16	C. H. Morton and Sons	,,	960	Philadel.
16	Schofield and Co.	,,	410	New York
16	J. T. Fletcher and Co.	,,	480	Antwerp
16	Anglo-American Oil Co. (Delaware)	Lamp	931,880	New York
17	F. Woodhill and Co.	Lub.	400	Antwerp

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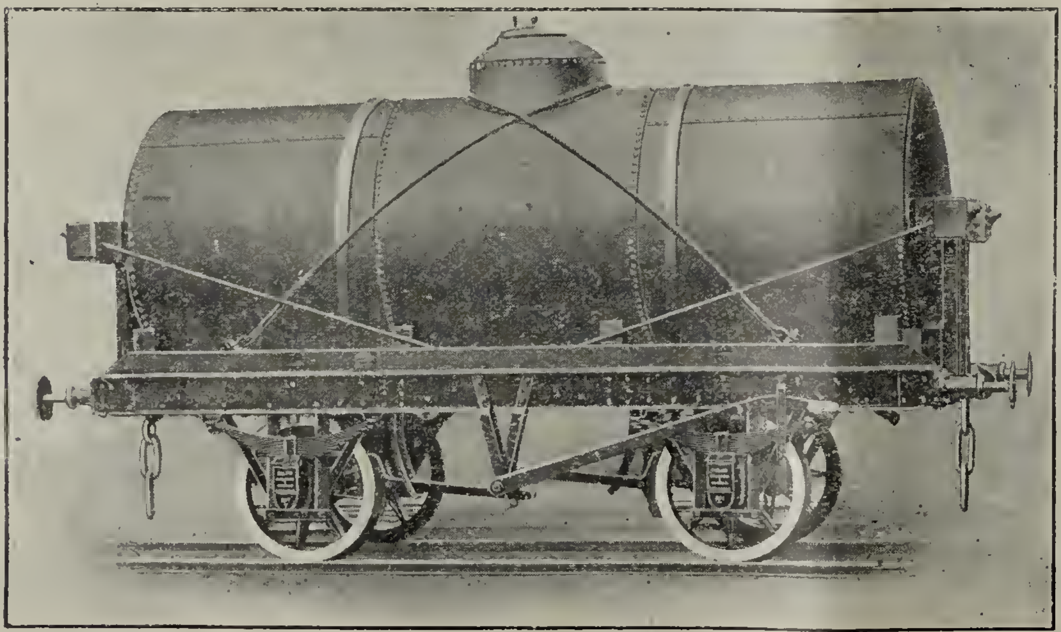

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IMPORTS.—(*Concluded*).

Date.	Port and Importer.	Description.	No. of Galls.	Port Whence.
Dec.	Newcastle—			
16	P. H. Matthiessen and Co.	Lub.	160	Bergen
17	Tyne-Tees Steamship Co.	,,	2,000	Hamburg
17	,,	,,	3,440	Antwerp
	Plymouth—			
17	Bristol Steam Nav. Co.	Lub. Gr.	160	,,
	Newport—			
19	Jones, Heard and Co.	,,	70	Antwerp
	Middlesbro'—			
17	J. J. Sutherland	Lub.	280	,,
	Southampton—			
17	P. E. Curry	,,	19,830	New York
17	White Star Line	,,	1,000	,,
	Swansea—			
15	Richards, Turpin, and Co.	,,	4,800	,,
	Aberdeen—			
15	R. C. Reid and Co...	Lub. Oil and Paste	270	Hamburg
	Glasgow—			
15	Clyde Shipping Co...	Lub. Gr.	120	Antwerp
15	Anchor Line	Lub.	48,290	New York
	Grangemouth—			
17	J. Currie and Co.	,,	4,000	Hamburg
17	W. Graham-Yooll and Co...	Lamp	4,000	,,
	Leith—			
15	J. Currie and Co.	Lub.	800	,,
17	Henderson and McIntosh	,,	3,200	Philadel.
21	W. Graham-Yooll and Co.	Lamp	4,410	Hamburg
21	J. Currie and Co.	Lub.	300	,,
21	Geo. Gibson and Co.	,,	560	Antwerp
	Belfast—			
17	G. Heyn and Sons	,,	1,000	Reval
17	J. C. Pinkerton and Co.	,,	210	Hamburg
19	,,	,,	50	,,
	Sunderland—			
18	British Pet. Co. (Servian)	Lamp	1,776,000	Pt. Arthur
	Deduct to Correct—		8,549,570	
	London—			
27/11	Asiatic Petroleum Co.	Spirit	135,450	Novorossisk
	Total for Week		8,414,120	

FOR THE WEEK ENDED 28TH DECEMBER, 1908—

Date.	Port and Importers	Description.	No. of Galls.	Port Whence.
Dec.	London—			
22	London and India Docks Co.	Lub.	500	Hamburg
22	Argo Steamship Co.	,,	240	Bremen
22	Anglo-American Oil Co. (Iroquois)	Lamp	2,028,930	New York
22	,, ,,	Gas	345,300	,,
22	,,	Lub.	1,270	,,
22	,, (Navahoe)	Lamp	2,526,120	,,
22	,,	Lub.	53,000	Philadel.
22	H. and G. Dutfield	Lub. Gr.	160	,,
23	London and India Docks Co.	Luo.	480	Antwerp
23	J. Harrison	Lub Gr.	140	,,
23	Argo Steamship Co...	,,	130	Bremen
23	Schlieman's Oil Co...	,,	1,150	Hamburg
24	,,	Lub. Gr.	3,560	,,
24	,,	Lub.	3,240	,,
24	Anglo-American Oil Co.	,,	33,000	New York
24	London and India Docks Co.	,,	750	,,
24	Lubricating & Fuel Oils, Ld. (Tiflis)	,,	320,000	Philadel.
24	Fielder, Hickman and Co...	,,	8,800	New York
28	Scott's Wharf	,,	4,000	,,
28	Bowring Petroleum Co.	,,	6,330	Philadel.
28	Anglo-American Oil Co. (Suwanee)	Gas	129,230	,,
28	London and India Dock Co.	Lub.	360	Boston
28	T. H Lee	Lub. Gr.	680	Hamburg
28	Page, Son and East	Lub. Oil and Gr.	1,240	Antwerp
28	British and Foreign Wharf.	Lub.	250	,,
28	J. Harrison	Lub. Gr.	240	,,
28	Wilkins, Campbell and Co...	,,	400	,,
28	Moxon, Salt and Co.	Benzol	30	Havre
28	M. Record	Lub.	6,000	Trieste
	Liverpool—			
22	Valvoline Oil Co.	,,	12,300	New York
22	Meade-King, Robinson & Co.	Resid.	86,160	Batoum
22	,,	Lub.	117,920	,,
22	G. B. Taylor	,,	41,840	New York
22	Ismay, Imrie and Co.	,,	240	,,
22	D. Currie and Co.	,,	490	Hamburg
22	J. T. Fletcher and Co.	Lub. Gr.	210	Antwerp
22	Pickford's, Ltd.	Lub. Oil and Paste	190	Hamburg
23	Bowring Petroleum Co.	Lub.	1,080	New York
23	E. H. Kellogg and Co.	,,	160	Rotterdam
23	Meade-King, Robinson & Co.	,,	73,800	Philadel.
23	,, ,,	,,	10,400	Hamburg
23	W. Harper and Sons	,,	900	Boston
23	Staveley and Co.	Lub. Gr.	40	New York
24	Crew, Levick and Co.	Lub.	24,530	Philadel.
24	,,	M. Colza	17,330	,,
24	G. B. Taylor	Lub.	8,240	Philadel.
24	Bowring Petroleum Co.	,,	2,120	,,
24	W. B. Dick and Co.	,,	44,610	,,
24	Worthington and Boler	Lub. Oil and Gr.	1,320	,,
24	Midland Railway Co.	Lub.	2,060	,,
28	Meade-King, Robinson & Co.	,,	13,000	Baltimore
28	W. B. Dick and Co.	,,	10,580	,,
28	A. Hopps and Sons	,,	2,580	,,
28	W. Gibson and Sons	Lamp	2,050	Boston
28	Stockdale and Doel	Lub.	6,720	,,
28	G. Stuart	Lub. Gr.	600	Hamburg
	Bristol—			
24	E. Stock and Sons	Lub.	2,000	,,
24	British Pet. Co. (Pectan)	Fuel	1,267,000	Pt. Arthur
24	H. R. James and Sons	Lub.	14,800	New York
	Goole—			
24	Goole S.S. Co.	,,	810	Hamburg
	Grimsby—			
22	J. Sutcliffe and Son	,,	280	,,
22	,,	,,	40	Antwerp
22	,,	,,	110	,,
	Harwich—			
22	D. Howard	,,	150	,,
22	,,	,,	60	,,
	Hull—			
22	T. Wilson, Sons and Co.	Benzol	1,800	Reval
22	,,	Lub.	57,760	New York
22	Hull & Netherlands S.S. Co.	Tar Oil	1,380	Rotterdam
6/12	J. Scott and Co.	Crude	80,250	,,
23	W. Gilyott and Co.	Lub.	36,120	New York
23	Wilsons and N.E. Co.	,,	320	Hamburg
24	W. Gilyott and Co...	,,	18,800	Philadel.
	Manchester—			
22	J. T. Fletcher and Co.	,,	40	Antwerp
22	Meade-King, Robinson & Co.	,,	4,160	Hamburg
24	,,	,,	142,030	Batoum
24	,,	,,	5,000	,,
24	,,	,,	455,000	Philadel.
28	,,	M. Colza	5,050	New York
28	,,	Lub.	26,400	Philadel.
28	Lamport and Holt	,,	780	New York
28	,,	,,	60	,,
28	Worthington and Boler	,,	3,350	Philadel.
24	D. Currie and Co.	,,	240	Hamburg
24	,,	,,	240	,,
24	Bramwell, Fern and Co.	,,	142,030	Batoum
24	,,	,,	5,000	,,
	Newcastle—			
24	Tyne-Tees S.S. Co...	,,	1,960	Antwerp
24	,,	,,	1,000	Hamburg
	Middlesbro'—			
22	J. J. Sutherland	,,	280	Antwerp
22	E. Harris and Co.	,,	480	,,
	Swansea—			
22	Burgess and Co.	,,	250	Hamburg
	Aberdeen—			
22	R. Connon, Reid and Co.	Lamp	2,000	,,
	Dundee—			
24	D. Alexander and Sons	,,	240	,,
	Glasgow—			
22	Anchor Line	Lub.	18,800	New York
22	Clyde Shipping Co.	Lub.Gr.	220	Antwerp
22	J. and A. Allan	Lub.	81,450	Philadel.
22	,,	M.Colza	12,260	,,
22	,,	Gas Resid.	3,700	,,
	Grangemouth—			
24	J. Currie and Co.	Lub. Oil and Paste	410	Hamburg
24	W. Graham-Yooll and Co.	Lamp	4,000	,,
	Leith—			
23	W. Graham-Yooll and Co...	,,	4,840	,,
26	G. Gibson and Co.	Lub.	520	,,
28	,,	,,	400	Antwerp
	Deduct to correct—		8,364,870	
	Barrow—			
	Anglo-American Oil Co.	Lamp	8,090	Philadel.
	,, ,,	,,	16,870	,,
	Total for the Week		8,389,830	
	Total for the Fortnight		16,803,950	

The Petroleum Review.

By PAUL DVORKOVITZ.

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THE PETROLEUM REVIEW:

The ANNUAL SUBSCRIPTION for both English and Foreign readers is 26s., including Postage. Single Copies may be had at the offices at 1s.

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Contributions upon items of interest are always welcomed from subscribers, but in each case these should be accompanied with the name and address of the sender, not necessarily for publication.

Editorial Notes.

The Batoum Petroleum Export Trade. The petroleum export trade of Batoum has of late been shewing quite an upward tendency. During the past few weeks of the year, both the arrivals of kerosene from Baku and the shipments have increased, while a most gratifying feature of the trade now is the impetus given to the demand for oil from foreign buyers, who have purchased a number of cargoes f.o.b., Batoum. The deliveries for November, however, were considerably ahead of shipments and stocks have in consequence increased by nearly 40 per cent. During the month bulk cargoes were shipped to Alexandria and the Far East to a total of a million poods, but the 600,000 poods shipped to the United Kingdom is considerably below the normal monthly figure. The opinion is held that with the turn of the year, matters will continue to improve at Baku. We, on our part, can only say that we hope so.

The Commonwealth Oil Corporation, Ltd. So much has been said and written regarding the Commonwealth Oil Corporation, Ltd., since its inception three years ago that it would appear at first sight that there is no new information to give of a character which would arouse the general interest of our readers. We are, however, in a position to give details and statistical data regarding the gigantic operations of the Corporation upon its vast territories embracing about forty square miles, which will come as a general surprise to members of the oil industry throughout the world, and as a most agreeable surprise to the shareholders themselves. In an undertaking of such a magnitude and situated in such a mountainous region, it will be obvious even to the lay mind that enormous difficulties had to be surmounted before it could be said with truth that the Corporation was on the road to assured and permanent success. In these days of carping criticism, it is so easy for one to ignore facts and draw totally erroneous conclusions, and one may therefore forgive those who, unable to possess their souls in patience, have launched forth in condemnation of the whole undertaking. The fact, however, remains that the Commonwealth Oil Corporation, Ltd., has achieved a work the magnitude of which it would be difficult to over-estimate, and in the article which we publish in this issue, we have attempted—and we trust successfully—to shew that not only does the future give promise of exceeding the most sanguine expectations of everyone connected with the Corporation, but it is reasonable to assume that the splendid energy and dogged perseverance which has been responsible for the yeomen work of the past, will bring its own reward at no distant date.

Decease of Mr. Theodore Tecklenburg. As we go to press, the sad news reaches us of the death of Mr. Theodore Tecklenburg, at Darmstadt. In the petroleum industry, as well as in general boring circles, the deceased gentleman made a great name for himself by his epoch-making work in six volumes upon "The Science of Deep Boring." He was one of the founders and honorary members as well as a past president of the Union of Boring Engineers, a fact which in itself shews the deep interest he took in all appertaining to the science of boring. Mr. Tecklenburg started his professional career as an engineer on the Lahu Railway, from 1862 to 1865 he was mines manager at Hamelu, the next five years he was a building contractor in Fulda and Wiesbaden, where in 1870, he entered the State service of the Grand Duchy of Hesse, and successively advancing to the ranks of Bergmeister, Bergrat, Oberbegreeth, and Geheimer Bergrat, he retired from active work in 1902. Two years ago the Union of Boring Engineers, to commemorate the services rendered by Herr Tecklenburg to the boring industry, established a medal known as "The Tecklenburg Medal," which is now awarded for services rendered to the boring science and industry. The news of his death, will, we are certain, be received with wide and deep regret in every petroleum producing country in the world.

A Much Needed Commission. A Commission presided over by the Chief of the Ministry of Agriculture, Count Wickenburg, and having as its objects to inquire into the present condition of the Galician petroleum industry, and to recommend measures for placing it on a sound basis, has recently commenced its deliberations. The President, in opening the conference, sketched the history and present condition of the Galician petroleum industry, and the debates which followed dealt chiefly with proposed Government administrative and legislative action to regularise the position of this important industry. The representatives of the petroleum firms laid special stress on the necessity of fixing a larger minimum of area for plots on which petroleum exploitation is to be allowed. The existing regulations as to the distance between bore holes was likewise declared inadequate. Proposals were also submitted, having as their object the creation of a monopoly for the sale of crude, and simultaneously allotting a certain quantity of crude to each refinery, the monopolisation by the State of the crude oil production, etc., etc. Three sub-committees were appointed to study the various aspects of the question. Some of these measures appear to us a little far fetched, but it is nevertheless clear that both the producers and the Government are alive to the need for energetic measures, and there is now some reason to hope that a workable scheme will be shortly evolved, whereby the long drawn out crises will be brought to an end at last.

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DR. PAUL DVORKOVITZ AND THE PETROLEUM INDUSTRY.

A ROUMANIAN DECORATION.

On Thursday afternoon, at the Roumanian Legation, London, Dr. Paul Dvorkovitz was decorated with rhe Order of the Crown of Roumania by the Roumanian Ambassador, on behalf of King Carol I., and also presented with the warrant constituting him an officer of the Order.

The decoration, the front of which is here reproduced, takes the form of a medallion of Maltese cross design, executed in enamel, with a feligree of fine gold, elaborately chased. In the centre of the medallion is a miniature of the Roumanian crown, surmounted with the inscription, " Prin noi insine." The decoration, which was presented as a New Year's honour, was conferred upon Dr. Dvorkovitz in recognition of his valuable services on behalf of the petroleum industry, especially that of Roumania.

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THE ANGLO-RUSSIAN COMPANIES DURING 1908.

Our article upon the above companies' operations during 1908 has unavoidably been held over owing to excessive pressure.—Ed., *P.R.*

LONDON OIL SHARE MARKET.

Friday, January 15th, 1909.

The Stock Markets have been dull and uncertain, but the decision of the Directors of the Bank of England yesterday to raise the Bank Rate from 2½ per cent. (at which it has stood since May 28th) to 3 per cent., has imparted a general feeling of satisfaction for the action, will do much to disperse uneasiness.

Oil Shares have been somewhat irregular, Assam Oil being the feature. A number of transactions have taken place and the price has advanced from $\frac{5}{8}$-$\frac{3}{4}$ to $\frac{3}{4}$-$\frac{7}{8}$, Burmah Oil Ordinary have risen from $4\frac{11}{16}$-$4\frac{13}{16}$ to $4\frac{25}{32}$-$4\frac{29}{32}$, and Lobitos Oil 6d. per share at 25s. to 26s. On the other hand, Shell Transport Ordinary have lost 3d. at 46s. to 47s., and Spies a similiar amount at 10s. 3d. to 10s. 9d. Russian 5½ per cent. Debentures have been marked down to 75-79, which shews a depreciation of 8 points.

◆

THE TIN PLATE MARKET.

Messrs. Norton, Owen & Co., of 4, Bishopsgate Street Within, London, E.C., report under date January 14th, 1909, as follows:—

The quarterly meeting of the iron, steel and tin plate trades was held at Birmingham to-day; there was not much business done, but prices were steady, makers appearing to be hopeful as to the future. Oil sizes were quoted as follows:—

IC	18¾ × 14	124 sheets	110 lbs.	12/1½ to 12/3 per box.
IC	19¼ × 14	120 ,,	110 ,,	12/1½ ,, 12/3 ,,
IC	20 × 10	225 ,,	156 ,,	17/3 ,, 17/4½ ,,

F.o.b. Wales. Tin lining and iron hooping extra.

Below we give particulars of the exports of tin plates for the years 1906, 1907 and 1908, from which it will be seen that the shipments for last year were remarkably well maintained, considering the depression which prevailed in most other trades:—

EXPORTS OF TIN PLATES.

	Year ended 31st December.		
	1906. Tons.	1907. Tons.	1908. Tons.
United States of America	61,518	58,920	60,602
British East Indies ..	47,451	54,964	46,144
Germany	36,998	41,065	31,139
Netherlands	27,825	29,252	25,469
France	24,349	25,801	24.639
Australia	16,159	14,638	18,671
Canada	19,975	20,101	17,808
Portugal	10,214	9,876	11,372
Belgium	11,996	9,140	9,888
Russia	4,581	8,381	9,553
Other Countries	113,736	133,190	147,722
Total Tons	374,802	405,328	403,007
Total Value	£4,936,868	5,917,104	5,480,993

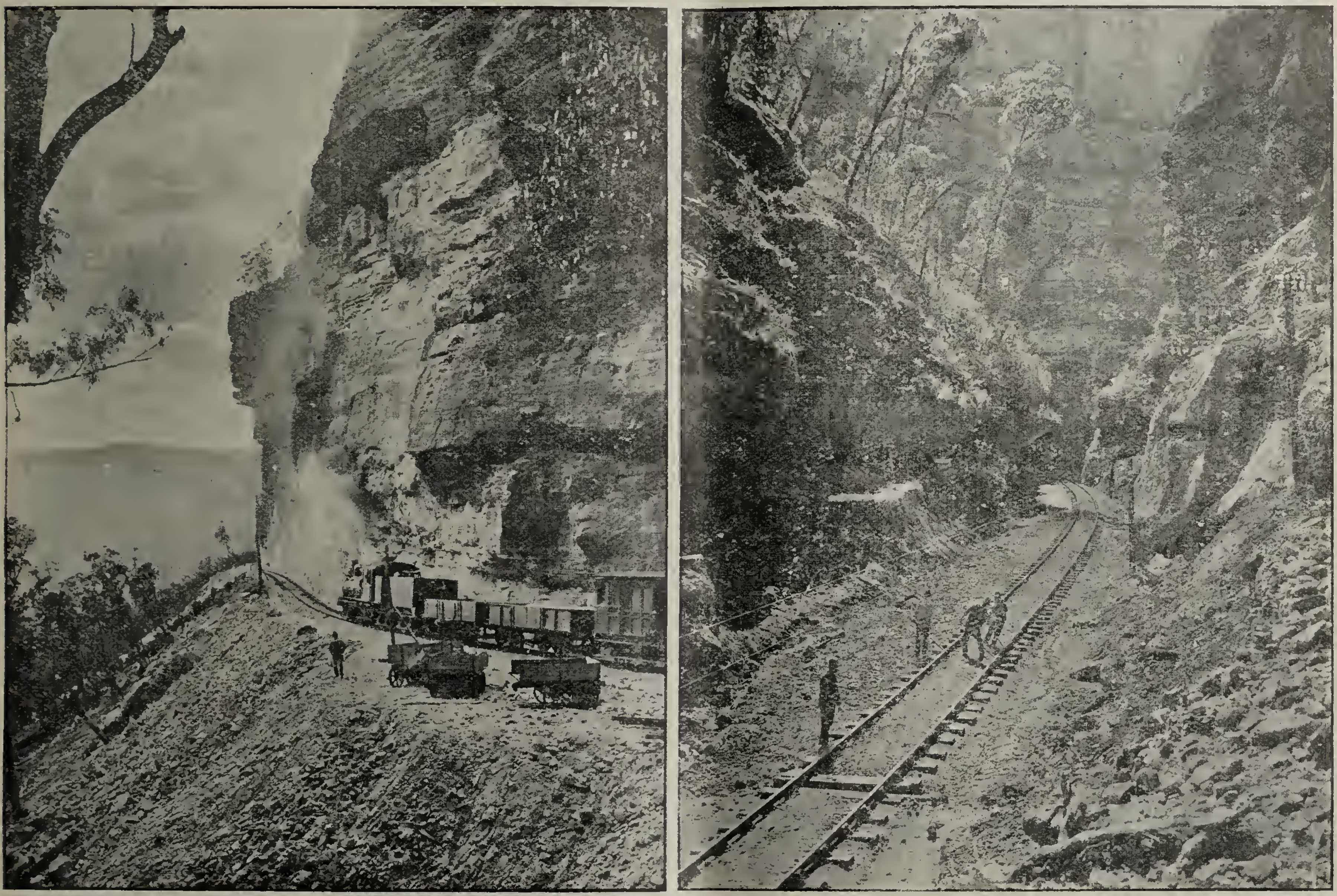
RAILWAY TANK WAGONS
Of every type for Cash, Purchased, Lease or Hire.
ROLLING STOCK OF EVERY CONCEIVABLE KIND.
STEEL STORAGE TANKS, ETC.
W. R. RENSHAW & CO., Ltd.,
PHOENIX WORKS. STOKE-ON-TRENT.
P.A.S.

THE COMMONWEALTH OIL CORPORATION, Ltd.

An Illustrated Record of its Achievements.

(SPECIAL TO THE "REVIEW.")

In view of the great interest which has been aroused of late both at home and abroad in the operations of that important English concern—the Commonwealth Oil Corporation, Ltd.—the present forms a most opportune time to give a few details bearing upon this great enterprise—details shewing not only the remarkable progress achieved in the teeth of almost insuperable difficulties—but the reason why success for the future is already assured.

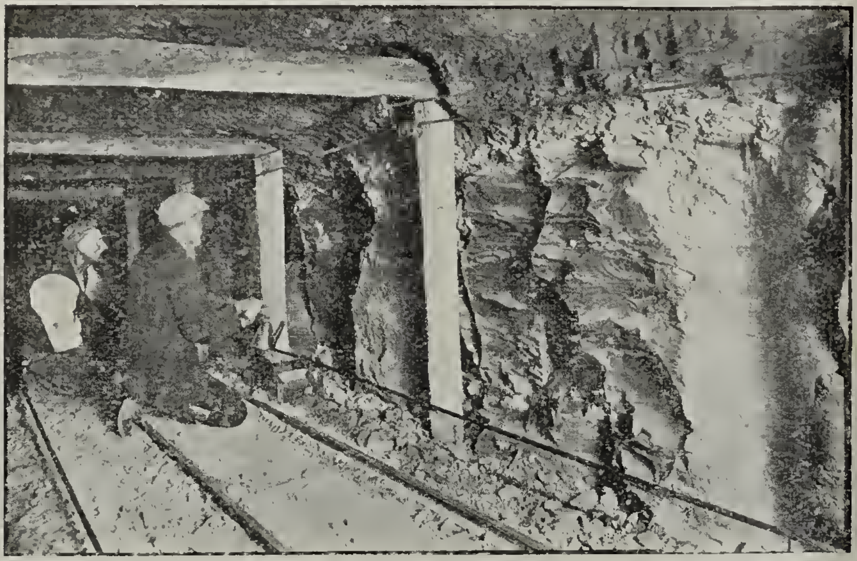


Typical Views of the Company's Railway to the Wolgan Valley.

Without diving at great length into matters of history, we may mention that about three years ago, the Commonwealth Oil Corporation was created, having as its object the development of the huge oil shale deposits known to exist both at Wolgan and Capertee in New South Wales, to export the richer portions of the shale, and to retort and refine the remainder, recovering the many valuable bye-products. Several inspections were made by Mr. D. A. Sutherland, the Company's General Manager, and each of these confirmed the original report that the shale deposits, besides being of immense richness, were practically limitless. Scarcely, however, had the Corporation commenced its developments, when, in the course of prospecting, valuable coal deposits upwards of 7 feet in thickness, were opened up, a discovery, the importance of which could not be over-estimated, for it indicated a very considerable addition to the Corporation's sources of revenue.

To establish a means of communication and transport between the Wolgan Valley and the main line of the Government railway was the first essential work to be taken in hand, and it says much for the energy and care exercised by those in control, that the intervening thirty odd miles of mountainous regions were soon traversed by a permanent railroad, the construction of which shews the remarkable engineering skill of those responsible for it. Up to the time of which we write, this section of New South Wales had been practically unexplored, and it will therefore be apparent to all that the task of the construction of the railway was one which fairly bristled with difficulties. The line leaves the Western main line of the New South Wales Government Railway, at a spot known as Newnes Junction, situated about 86 miles from Sydney. It soon commences an upward course, eventually reaching an elevation of 4,000 feet above sea level, then falling by a similar grade of one in thirty-three to Deane, the first station on the line, and about twenty miles from Newnes Junction.

The construction of this portion of the railway was not completed without engineering difficulties being encountered, but these were not to be compared with those met along the remaining twelve miles of route to the Wolgan Valley. These were of the most difficult and trying description it is possible to conceive. The mountainous nature of the country may be gathered from a glance at the photographs we publish in the course of this article, and which give an excellent idea of the amount of engineering skill which must have been brought to bear upon the construction of the line. The track grade beyond Deane is one in twenty-five, and through tunnels and cuttings hewn out of the solid rock, the line passes round Cape Horn along the edge of a precipice on the one side, and the face of an overhanging mountain on the other, eventually finding its way to the township of Newnes, and two miles further on to the shale mines and works. Throughout its course, the line is of the standard gauge, and this in itself will be recognised of great importance. Its total cost may be taken at approximately £150,000, and we learn from authoritative sources, that the line forms quite a record not only in the time taken by its construction, but from the point of view of its cheapness, while it is capable of being maintained in its present efficient state with a minimum of cost.



Tunnel Four-fifth Mile Length, Shale 4 feet 4 inches.

Though progress could not be made at the works as rapidly as could have been desired until the completion of the railway line, development was by no means seriously retarded, but with the railway running right upon the property in the Wolgan Valley, machinery was quickly transported to the spot, and in a hundred and one directions work was pushed on as if by magic hand. A word or two might well be said here of the Wolgan Valley. There, spread throughout the valley, so rich, as has been already proved in its coal and oil shale wealth, are the various installations now being equipped for the Commonwealth's business. Electrical plant for supplying power and light to the shale and coal mines, machine shops, collieries, brick yards, are now in full working order. The valley, as being the centre of the Commonwealth Oil Corporation's operations, is to-day one busy hive of activity, and looking down upon this wonderfully fine panoramic view from the overhanging mountains, one cannot but be greatly impressed with the gigantic nature of the undertaking. A pen picture but inadequately describes this mountain home of the Commonwealth Oil Co. By establishing itself in the Wolgan Valley, the aim and object of the company has been to secure concentration. Here is to be obtained an always plentiful supply of water, which in itself means much, while the supply of coal, of excellent quality, but of which we shall say more later on, and the still larger quantities of oil shale, for the exploitation of which the company was primarily formed, render the Wolgan Valley the ideal site for the Corporation's works. Yet many difficulties have had to be faced in the removal of rocks, etc., and the clearing of the positions for the fine and solid-looking buildings which to-day go to make up the installations, tend to shew that the hand of progress has not yet been stayed, for during the year which has just closed, the whole of the ground has been prepared for the works by means of many special excavations. The first bench of 64 retorts is rapidly approaching completion, the second bench will be shortly commenced, and it is an open secret that the third will be "going up" toward the end of the present year. The condenser and exhaust plant now being installed will be sufficient for all three benches of retorts, oil works and refineries. The crude oil produced from the first bench will be refined at Hartley Vale pending the completion of the up-to-date Wolgan refinery.

In addition to the electric power which has already been installed in both the Wolgan and Capertee Valleys, a central power station has been commenced, the machinery for which is already on the ground, while refrigerating plant, supplied by Messrs. Stern and Co., Glasgow, is now being erected.

It may be mentioned here that the power house is 80 feet by 40 feet with a 10 ton overhead travelling crane running its entire length. This allows space for or three 500 k.w. steam sets, and the power house has been arranged with a view to future extension. The plant being installed will consist of Belliss and Morcom 720 h.p. three-crank compound engines direct coupled to 500 k.w. Westinghouse generators, with a large five panel three-phase switchboard having all the

Ordinary Working Face, Torbane Shale Mine.

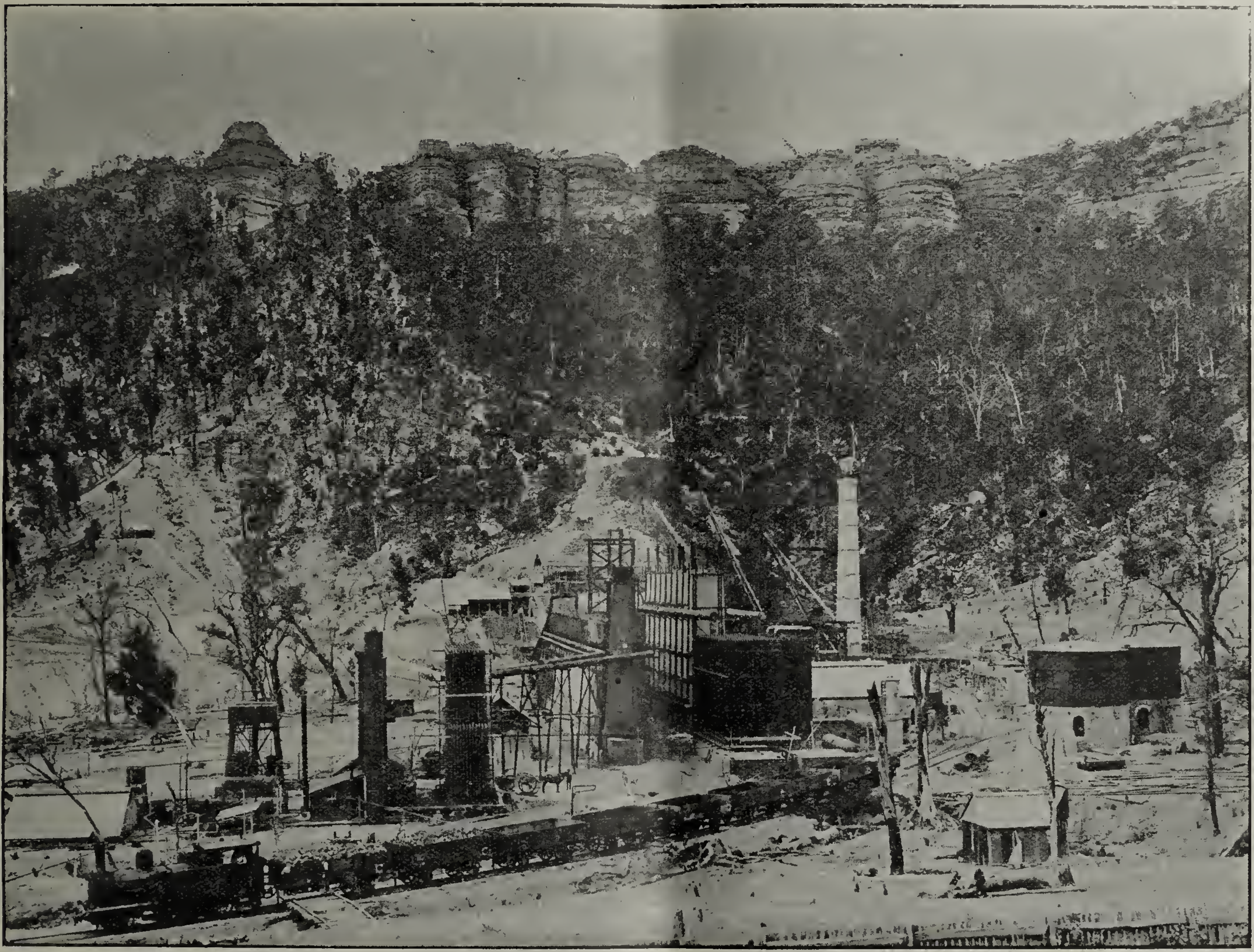
necessary instruments for controlling the generator and the various electric motors on the property, steam being supplied by a battery of Stirling boilers. The boilers are fitted with chain-grate stokers and with superheaters for superheating to 100° F.

The electrical system used is three-phase at 440 volts pressure, which allows for a lighting voltage of 250 to be used without the necessity of transformers. The current is distributed from the main switchboard in power house to the various motors on the property by means of overhead and underground cables.

As may be seen from one of the photographs here reproduced, the extensive machine shops are situated in a most convenient position near the centre of the works, and close to the retorts. These buildings are approximately 230 feet in length and 18 feet high, being built of brick. The whole plant is electrically driven. The boiler shop is fitted with a powerful boiler, bending machine and grinder, and a six-ton punching and sheering machine, together with a number of forging and pneumatic riveting hammers, drills, etc. The smiths' shop is supplied with compressed air, and has also a large pneumatic hammer capable of striking a blow up to three tons. The machine and fitting shop, which has a most up-to-date lathe, is supplemented by four others, of themselves competent to turn out a large variety of work, while the installation here also includes a shaping machine, with a graduated stroker and automatic action. A large planing machine, capable of dealing with big work, and entirely self-acting, has been erected for the making of fitted bolts and studs. Drilling machines of various makes have been installed, and these will drill holes from one-sixteenth of an inch to twelve inches in diameter. Apart from a fine radial arm machine, there are four drilling machines for smaller work, while the other machinery includes two eccentric saws, a self-acting screwing machine, grinding machines, etc.

Passing from this important branch of the company's undertaking, let us now see what has really been accomplished in regard to the exploitation of the shale beds in the Wolgan Valley, an object for which the Corporation was originally formed. Over 40,000 feet of development work have been done on the shale, this work, together with the existence of extensive outcrops running to miles in length in both valleys, having proved the existence of 20,000,000 tons, while by taking into consideration the shale showings elsewhere upon the Corporation's property (covering, by-the-bye, an area of nearly forty square miles) another even larger quantity of oil shale may be presumed to be waiting development. In the words of Sir George Newnes, therefore, it can with safety be said that the Corporation's shale bed is a gigantic oil field, yet not at all speculative. On the contrary, it is as certain as a proved coal field, and has from 7,000,000 to 10,000,000 tons of oil awaiting recovery, requiring not wells but retorts.

But the extensive shale beds form not the only valuable asset of the Commonwealth Oil Corporation, Ltd.



Torbane New Crude Oil Plant on Right, Old Plant on Left, and Mine Entrance in Centre.

An excellent seam of coking coal was found about 100 feet below the shale seam, and for the treatment of this coking coal, four trial coke ovens of the beehive type were erected on the side of the valley opposite the shale mine. A shaft, sunk to a depth of 200 feet to intersect the coal seam,. was fully equipped with the necessary power plant and winding machinery, and is now in full working order. A new shaft was then sunk some 40 yards or 50 yards from the old one, and this, too, has for some time been in working order, being able to cope with a very large output. The coke produced from the trial ovens having proved to be of a far superior quality to any hitherto manufactured in Australia, large orders have been received for deliveries exceeding 2,000 tons per week. In order to facilitate the output of the coke, no time was lost by the management in putting in hand further sets of coke ovens. A set of 40 of these have been at work for the past five months, while an additional 60 are now being installed, bringing the total up to 104. When all these are in full working order, the production will be about one thousand tons per week, for the latest types of coke extracting machinery with conveyers is being installed.

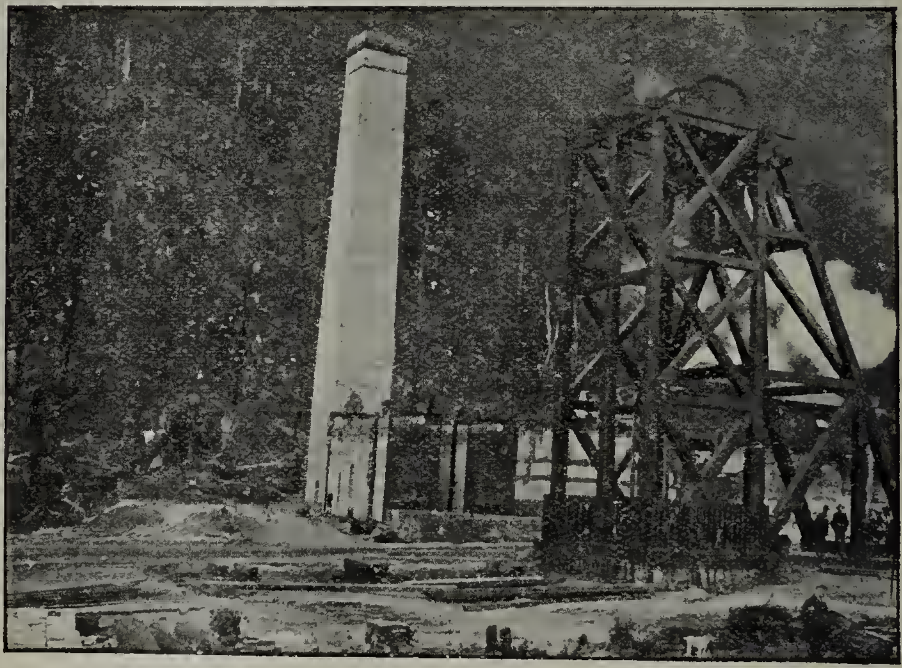
Pumpherston Retorts Being Erected at Newnes.

Machine Shops, Newnes.

From what we have said, it will be apparent that the Corporation has a very valuable asset in its coking coal—an asset which was not thought of when the company was formed. The coal requires no washing, being run straight into the coke ovens. The Australian consumption of coking coal is very considerable, and for a long time at all events a ready market at home awaits the coke, while, when the time arrives for export, Japan and the Pacific Coast offer very profitable markets

As was mentioned at the first meeting of the Corporation, the New South Wales Shale and Oil Co. was taken over very soon after the Corporation commenced its career. The assets here consisted of shale and coal mines at Torbane, crude oil works, together with 40 retorts, and refineries and candle works at Hartley Vale. The map produced in this article shews the comparative distance of these two places from the Wolgan Valley and Sydney. Since the New South Wales Co. was taken over, 32 retorts of the Scottish type have been erected at Torbane, and fully equipped with condensers, scrubbers, exhausters, and complete crude oil and ammonia plant, and these latest additions have now for some months been producing crude oil of exceptionally high quality, far superior to that obtained from the old retorts, while the yield per ton of shale is also greater. Including the old retorts, the Torbane crude oil works can produce upwards of three and a-half million gallons per annum, as about twice as much oil per retort is produced in using Australian shale, which is itself three to five times richer than Scottish shale.

Central Power Station, Newnes.



Coal Mines, Newnes, No. 2 Shaft.

Under the Corporation's management, extensive developments have taken place in the shale mines at Torbane, and these have proved the existence of far larger quantities than anticipated by the original owners at the time when the company was taken over. The coal mines have also been developed, a seam of coal 15 feet in thickness above the shale measures having been opened.

The Hartley Vale refineries, too, have been extended in order to render them capable of dealing with the crude from both benches of the Torbane retorts. The filter presses have been increased, and continuous distillation plant been introduced, while new agitators have been provided. The inferior quality of oil formerly produced in Australia can be readily accounted for when it is realised that formerly these works—then the best of their kind—washed with sulphuric acid, and subsequently with caustic soda in the same vessel. Increased sweating plant and additional sheds for making paraffin wax, extra stock tanks, together with improved candle machines of the latest "Cowles" type, and the necessary boiler power and extra stock tanks have been provided to increase the capacity of the refinery at present to 15,000,000 gallons per day. This will shortly be increased to 25,000,000 gallons per day by further improvements being made. This branch of the Corporation's work is already shewing substantial profits, which are bound to most materially increase when the whole of the extensions are in full working order.

Trainload of 200 Tons of Shale and Coke going to Market.

But it is not even the extensive shale and coal seams which exhaust the Corporation's valuable assets. Upon its properties are large quantities of clay, and from this fire bricks are being produced, which in quality are stated to be quite equal to the well-known Scottish bricks. The brick works at Wolgan have a capacity of 20,000 bricks per day. Then in addition, the greater portion of the property is well wooded, the supply of timber

CLASSIFIED IMPORTS INTO UNITED KINGDOM UP TO JANUARY 11th, 1909.

IN GALLONS.

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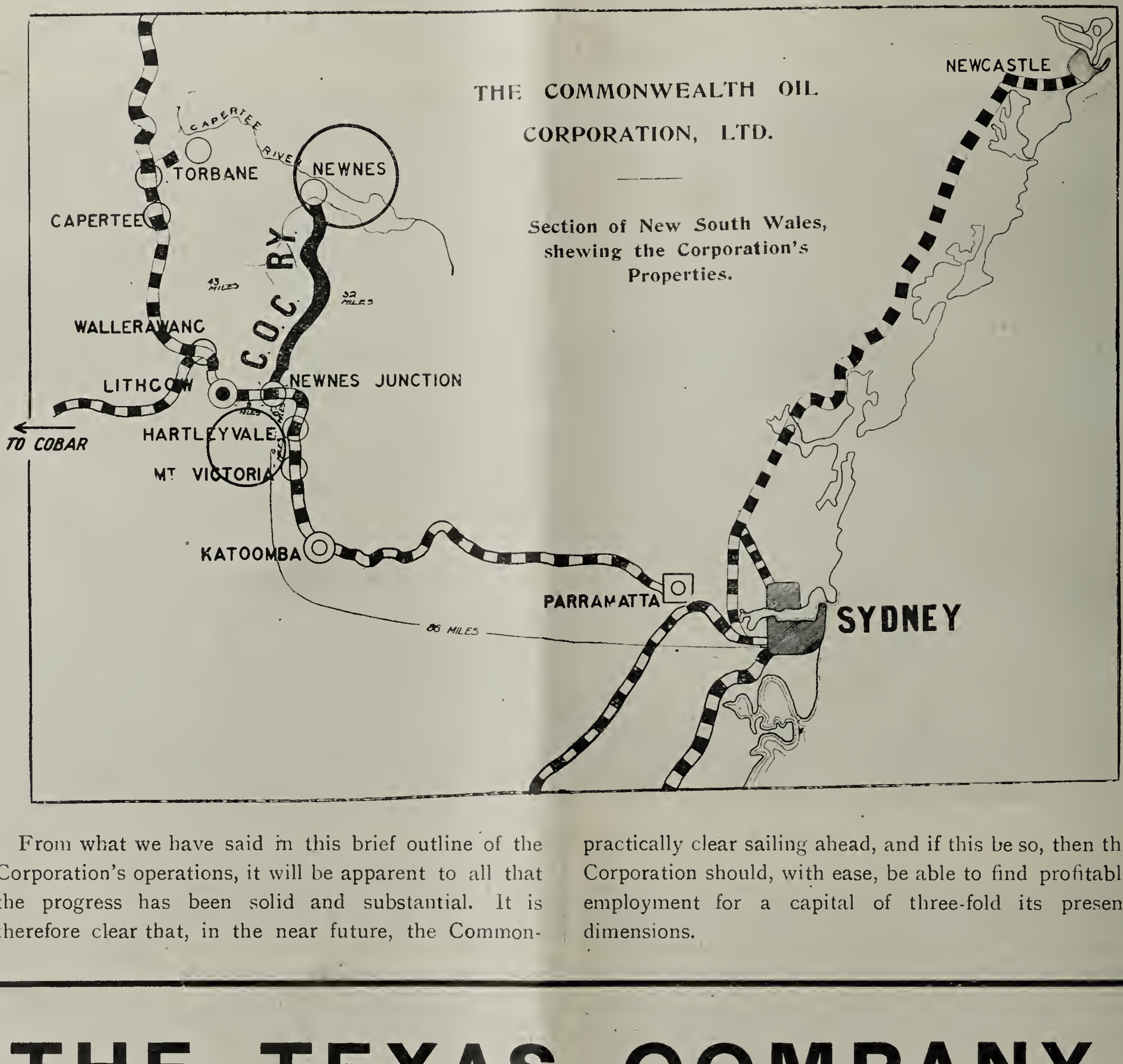
Country.	Illuminating.		Lubricating.		Residuals.		Gas Oil. (Solar)		Benzine.		Fuel Oil.		Other Descriptions.		Totals.	
	Since Dec. 28.	From Dec. 28.	Since Dec. 28.	From Dec. 28.	Since Dec 28.	From Dec. 28.	Since Dec. 28.	From Dec. 28.	Since Dec. 28.	From Dec. 28.	Since Dec. 28.	From Dec. 28.	Since Dec. 28.	From Dec. 28.	Since Dec. 28.	From Dec. 28.
Austria ...	—	—	—	—	69,490	69,490	—	—	—	—	—	—	—	—	69,490	69,490
Belgium ...	—	—	17.350	17,350	—	—	—	—	—	—	—	—	—	—	17,350	17,350
Canada ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dutch India.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Germany ...	31,440	31,440	22,410	22,410	—	—	—	—	—	—	—	—	4,240	4,240	58,090	58,090
Holland ...	—	—	—	—	—	—	—	—	—	—	—	—	3,900	3.900	3,900	3,900
Roumania ...	139.750	139,750	—	—	—	—	—	—	938,360	938,360	—	—	—	—	1,078,110	1,078,110
Russia ...	1,136,430	1,136,430	5,540	5,540	—	—	—	—	120	120	—	—	—	—	1,142,090	1,142,090
U.S.A. ...	5,752.030	5,752,030	2.108,300	2,108,300	5,500	5,500	4,915,880	4,915,880	—	—	—	—	948,920	948,920	13,730,630	13.730,630
Other Countries	—	—	80	80	—	—	—	—	—	—	—	—	—	—	80	80
	7,059,650	7,059 650	2,153,680	2,153,680	74,990	74,990	4,915,880	4,915,880	938,480	938,480	—	—	957,060	957,060	16,099,740	16,099 740

being suitable for all classes of work. Already much of the timber has been utilised for mining work, railway sleepers, as well as for building purposes, and in this way the company's two saw mills have been kept fully employed.



From what we have said in this brief outline of the Corporation's operations, it will be apparent to all that the progress has been solid and substantial. It is therefore clear that, in the near future, the Commonwealth Oil Corporation, Ltd., will achieve for itself a name in its mountain home in far away New South Wales, of which all interested in it may feel justifiably proud. The major difficulties have been surmounted, and to us it appears that the future will be practically clear sailing ahead, and if this be so, then the Corporation should, with ease, be able to find profitable employment for a capital of three-fold its present dimensions.

THE TEXAS COMPANY,
Transporters, Refiners and Distributors of Petroleum and its Products.
CRUDE BENZINE & DEODORISED BENZINE.
FUEL OIL AND GAS OIL
A Specialty.
LUBRICATING OILS.
HIGHEST GRADES. ❧ *UNIFORM QUALITY.*
"TEXACO" BITUMEN.
Over 99 % Pure Bitumen.

THE ADULTERATION OF PETROLEUM PRODUCTS.

(Concluded from page 20.)

For the purpose of comparison with the properties of the adulterated articles, the author gives the average tests of the products of the refineries of Nobel and Schibaieff, who, by the quantity and quality of their products, occupy a foremost position among Baku refiners, and whose standards of quality have so far been found the most suitable for Baku oils :—

	Description of Product.	Firm.	Specific Gravlty.	Viscosity at 50° C., 80° C., or 100° C.	Flash-Point.	Percentage of Tarry Matter.
1.	Machine Oil	Nobel's	0·905-0·910	6·5-8·0	180° C.	—
2.	,, ,,	Schibaieff	0·905-0·910	7·0-7·5	185° C.	3·5-3·7
3.	Cylinder Oil, No. 2	Nobel	0·911-0·917	12·5-13·0	200° C.	—
4.	,, ,, No. A	Schibaieff	0·908-0·914	10-15	235° C.	3·75-4
5.	,, ,, No. 1	Nobel	0·914-0·919	3-4 (at 100° C.)	230-240° C.	—
6.	,, ,, No. 00	Schibaieff	0·914-0·918	5·5-6 (at 80° C.)	250-260° C.	3·8-4
7.	Viscosine, No. 1	Nobel	0·920-0·925	7-8 (at 100° C.)	255-280° C.	—
8.	Cylinder Oil, No. 000, Extra	Schibaieff	0·915-0·920	6·5-7·5 (at 80° C.)	280° C.	18
9.	Nigrol	Nobel	0·930-0·935	—	260° C.	—
10.	Cylinder Oil, No. 000	Schibaieff	0·925-0·930	19-20 (at 80° C.	300° C.	—

The light petroleum oils from the moment of the introduction of a uniform duty of 60 copecs per pood on all oils ceased to be the object of adulteration, for the simple reason that there is no cheap material available for the purpose. Formerly it was possible to mix light kerosene with heavy, and gain by the 10 copecs difference in duty, but this has been rendered impossible by the equalisation in duty. However, in August, 1907, there appeared on the market in the interior white Surakhany crude oil, which in quality is similar to heavy gasolene, but, as a crude oil, is free from taxation. This crude oil can with advantage to the dealers be added to illuminating oils, as its presence there to the extent of 25 per cent. and even 50 per cent., easily escapes the notice of the consumer. There are no other means for adulterating illuminating oils.

Solar oils are quite secure from any adulteratiou both on account of their price and properties, *i.e.*, transparency and low specific gravity, which preclude the addition of mazout or crude oil. The solar oil mostly in use in Russia is the heavy distillate with a specific gravity of 0·869 to 0·875. Mixed with vegetable oil it goes to make an artifical "ikon" oil, *i.e.*, an oil burnt in small lamps in front of the images of the saints to be found in every orthodox household. The considerable demand for this product in its unrefined state, and the comparatively small sale of it in its refined state by the Baku refineries, led to the supposition that solar oil was being made in the interior without payment of duty. This, however, is quite unfounded. The vaseline oil prepared at the Baku refineries with a specific gravity of 0·863 to 0·869, is transparent, its colour is 3 by the Gow apparatus, but owing to its having to be treated with a large quantity of strong sulphuric acid its price is very high. At 2·50 to 3 roubles per pood it can be used only in the preparation of expensive perfumes and drugs, but not for "ikon" oil. The makers of the latter product prefer a heavy solar distillate of 0·870-875, which they refine themselves, bring it up to the necessary colour mark, and any colour left in it is easily covered by the naturally yellow colour of the vegetable oil with which it is mixed. The fluorescence inherent to all insufficiently refined mineral oils is removed by treatment with nitric acid. Thus the article prepared locally is more suitable for its purposes both in quality and price than the vaseline oil prepared at Baku by Nobel. But the latter firm, even if it loses in its sale of the vaseline oil, recoups itself by increased sales of heavy solar distillates.

The author summarises his conclusions in the following manner :—

(1) Benzines, ligroins and illuminating oils of various descriptions with the coming into force of the law of the 13th of April 1905, imposing a uniform tax on all refined petroleum products, have ceased to be adulterated. The appearance on the market of white Surakhany crude oil has opened a fresh field for adulteration on an extensive scale.

(2) Solar oils are not adulterated, but the refining of the heavy solar distillates in the interior of Russia must be considered illegal and injurious to the interests of the Treasury.

(3) Machine oils of various densities, being transparent, do not lend themselves to adulteration on any large scale. At the same time the adulterating material, being also a dutiable article, the Treasury suffers no loss by the adulteration.

(4) The adulteration of dark lubricating oils, and frequently also of cylinder oils, standing on the limit of transparency, but chiefly of the non-transparent varieties, are practised on a large scale.

(5) The spread of adulteration is brought about (*a*) by the high price of the pure material paying duty, and the abundance of a duty free product, which in some properties resembles the genuine article; (*b*) the ease of the operation, which consists of a simple mixing, at most requiring only slight heating; (*c*) the carelessness with which large consumers treat the question of the quality of the lubricating oils used by them; and (*d*) the high rate of profit which is earned by adulteration, going up to 100 per cent.

(6) The adulteration of heavy lubricating oils with duty free products means a loss to the Treasury. The total amount of such loss, however, cannot be very great. The total quantity of cylinder oils forwarded from Baku

to the interior and another 200,000 poods are manufactured by refineries in the interior, making a total of 400,000 poods, out of which a considerable quantity is exported.

(7) The fact of an adulteration of dark, non-transparent lubricating oils is proved by the excessive percentage of tarry matter, the outside limits for which in cylinder oils of a specific gravity up to 0·920 must be taken as 10 per cent. Other indications are—specific gravity, viscosity, flash-point, but these vary to such an extent in different kinds of oil that it is difficult to fix standards for them.

(8) Adulteration of lubricating oils can be suppressed only by the consumers being more exacting as to the quality of the oils bought by them, and no Government action can have any effect. Raising the limit of percentage of tarry matter above which lubricating residuals are exempt from taxation beyond 40 per cent., may to some extent check adulteration by restricting the supply of cheap adulterating materials. This measure would, however, hamper thé sale of lubricating residuals, which have a considerable independent sale as a cheap grease for use by the peasantry.

◆

LAUNCH OF THE "MINHLA."

Messrs. Sir W. G. Armstrong, Whitworth and Co., Ltd., have launched from their Walker Shipyard a steel screw petroleum steamer, built to the order of the Burmah Oil Co., Ltd., of Glasgow. The principal dimensions are:—Length, 208 feet; breadth, 34 feet; and depth, 18 feet 6 inches. The scantlings and arrangements of the vessel are in accordance with the Board of Trade requirements, and those of Lloyd's for 100 A1 classification.

The petroleum cargoes are carried in tanks, arranged in accordance with the builder's usual practice, and loaded and discharged by means of two powerful Worthington pumps connected with double pipe lines, steam windlass steam winches, steam and hand-steering gear, electric lighting, and other usual fittings supplied to such steamers. The officers' accommodation is under the bridge, engineers in poop, seamen and firemen in forecastle.

On leaving the ways, the vessel was gracefully named "Minhla" by Mrs. Saxton White. After the launch, the vessel was taken to the works of the Wallsend Slipway and Engineering Co., Ltd., where she will be fitted with triple expansion machinery. The cylinders will be 17 inches, 28 inches and 46 inches, with a stroke of 30 inches, steam being supplied by two boilers, 10 feet 6 inches diameter by 11 feet 3 inches long. The boilers will be in accordance with the latest practice for burning either liquid fuel or coal.

Amongst those present at the launch were:—Captain Currie (under whose supervision the vessel has been constructed), Mr. and Mrs. R. Saxton White, Mr. Edwin L. Orde, Mr. Simon Orde, Miss White, Miss Irene White, Mr. D. R. MacDonald, Mr. A. Gulston, Mr. and Mrs. Douglass, Mr. J. Douie, Mr. and Mrs. A. Douie, Nurse Johnson, Nurse Wortherstone and others.

ROUMANIAN PRODUCTION DURING NOVEMBER.

According to statistics compiled by the *Moniteur du Petrole Roumain*, the production of crude oil in Roumania in November was 89,850 tons. To this figure has to be added the output of some minor firms, who have not yet made their returns, and this is expected to bring the total November output up to about 92,000 tons, against 96,519 tons produced in October.

The production of the various fields during the month was:—

Prahova District—	Tons.
Bustenari	37,160
Campina-Poiana	16,887
Moreni	27,314
Baicoi-Tintea	2,861
Other Fields	628
Total in Prahova	84,850
Dambovitza District	2,419
Buzeu District	1,221
Bacau District	1,276
Total	89,766

The production of the leading firms was as under:—

	Tons.
Steaua Romana	25,429
Regatul Roman	16,649
Concordia Co.	13,407
Romano-American Co.	7,243
Astra Co.	5,860
International Co.	2,920
Trajan Co.	2,803
Aquila Franco-Romana	2,187
Colombia Co.	2,011
Nafta Co.	1,636
Seceleanu Bros.	1,537
Anglo-Roumanian Petroleum Co., Ltd.	690
Arnheemsche Co.	682
Galo-Romana Co.	503

Assuming that the production of crude oil in December will remain on the same level as in November, we get a total for 1908 of 1,136,581 tons, or practically the same as in 1907, when it amounted to 1,129,097 tons.

◆

PRODUCTION OF ENGLISH COMPANIES IN RUSSIA.

Baku Russian Petroleum Co., Ltd.—The production for the week ended 2nd January was 150,555 poods, or 2,427 tons; and for the week ended 9th January was 143,800 poods, or 2,318 tons.

Russian Petroleum and Liquid Fuel Co., Ltd.—The production for the week ended 2nd January was 206,000 poods, or 3,321 tons; and for the week ended 9th January was 205,000 poods, or 3,305 tons.

Spies Petroleum Co., Ltd.—The production for the week ended 3rd January was 166,725 poods, or 2,689 tons. The production for the corresponding week last year was 138,990 poods, or 2,241 tons. The output for the week ended 10th January was 159,675 poods, or 2,575 tons. The total production for the corresponding week last year was 128,880 poods, or 2,078 tons.

The European Petroleum Co., Ltd.—The production for the week ended 3rd January was 152,912 poods, or 2,465 tons; and for the week ended 10th January was 149,172 poods, or 2,405 tons.

RUSSIAN NOTES

Pipe Line Figures.—In November there were pumped through the pipe line to Batoum 3,487,350 poods, which is about a million poods more than in October. The quantities of oils dispatched from Baku by rail in November were:—Kerosene and lubricating oils, 2,591,050 poods; residuals, 570,380 poods; and benzine, 6,000 poods.

The Bebe-Eybat Petroleum Co., Ltd., having now paid up the arrears of rent which were due to the Government, to the extent of 546,707 roubles, with 6 per cent. interest thereon, the authorities have, in view of the difficult position of the company, agreed to relieve the company of the penalty to which it was liable for non-payment of rental at the proper time.

Spouters at Bebe-Aibat.—On the 13th of December the Caspian and Black Sea Society simultaneously obtained two spouters on its plot No. 28 at Bebe-Aibat. One flowed for two hours from well No. 33, and produced 20,000 poods, whilst the other flowed for ten hours from well No. 6, and yielded 17,000 poods. Well No. 6 has for several years been abandoned, but has now again attracted attention. Both spouters threw out an enormous quantity of sand.

The Industrial Tax Adjusted.—The committee charged with the task of apportioning the industrial tax among the petroleum producers has fixed the amount to be imposed on the private oil firms in the Baku district, as distinct from the joint stock companies, for 1908, at 200,000 roubles instead of 295,000 roubles levied in 1907. This reduction is explained by the reduced crude oil production. It is estimated approximately that the gross revenue of all oil firms at Baku is 26 per cent. below that for 1907, whilst for the private firms separately the decline is 31 per cent.

Capital Wanted.—The directors of the Russian Napthia Co., known in the trade as the Lianozoff Co., are now much concerned over the question of finding fresh working capital. Having found it impossible to carry out the scheme of issuing 1,200,000 roubles worth of debentures on a share capital of 2,400,000 roubles, the directors have now decided to make a fresh issue of shares, after previously reducing the nominal capital to meet a revaluation of assets. In this company are interested: M. G. Lianozoff, M. G. Pollak of the Mazout Co., O. O. Lippe, A. A. Karganoff, A. I. Ziering, of Messrs. Funker and Co., etc.

Batoum Statistics.—The following are the figures of the arrivals from Baku and shipments from Batoum in November, and also the stocks at Batoum at the end of that month.

	Arrivals. Poods.	Shipments. Poods.	Stocks on Nov. 30th. Poods.
Refined Kerosene ..	3,700,000	2,388,000	2,455,000
Kerosene Distillate ..	322,000	238,000	256,000
Solar Oil	14,000	—	34,000
Machine Oil	664,000	729,000	695,000
Spindle Oil	105,000	140,000	119,000
Cylinder Oil	23,000	18,000	17,000
Vaseline Oil	—	80,000	158,000
Lubricating Oil Residuals	73,000	92,000	—
Mazout	153,000	191,000	401,000
Other Products ..	72,000	—	116,000
Total ..	5,126,000	3,876,000	4,251,000

ROUMANIAN NOTES.

The Romano-American Co.—The Romano-American Co.'s output at Moreni is now between 400 and 450 tons daily, the bulk of which is obtained from the Tuicani part of the field, and more particularly from wells Nos. 6, 8 and 14, which have eruptions daily.

A Very Good Production.—The Regatul Roman Co.'s well No. 33 at Moreni, has struck oil at a depth of 405 metres, and obtained a daily yield of 50 tons No. 32 is also expected to strike oil shortly. This company's total daily output now fluctuates between 500 and 550 tons.

The Moreni Spouter.—The Astra Co.'s well No. 7 at Moreni, is now yielding about 200 tons daily. The company's total production at Moreni now fluctuates between 250 and 300 tons daily. Their exploration well No. 21 has reached a depth of 670 metres, with a five-inch column of casing.

At Doftanet.—Well No. 94 of the Concordia Co., near Bustenari Church, which became productive in November, is yielding between 20 and 30 tons of oil daily. The Anglo-Roumanian Petroleum Co., Ltd, is preparing to drill two wells here, on the plot acquired from Messrs. Stroe, Draghici and Co.

Transforming Hand-Dug Wells.—Mr. Joseph Wagner is now transforming two productive hand-dug wells into boreholes on his Rosa plot at Bustenari. The Roumanian Crown Co. has commenced drilling two new boreholes near well No. 172 of the Concordia Co. The Steaua Romana has struck oil in its well No. 151 at Mislisora and obtained a yield of 10 tons daily.

Prolific Burloi.—Mr. Van de Werk's prolific well No. 3 at Burloi, continues to spout intermittently, yielding between 70 and 100 tons daily. Owing to want of means for storing or removing the oil no baling is done. The Credit Petrolifer is now erecting some storage tanks and a pumping station in the vicinity of this well. Up to the time of writing, this well had yielded altogether 2,300 tons of oil.

A Centre of Activity.—Burloi is now the centre of great activity. The Steaua Romana expects to strike oil shortly in its well No. 214 which is situated to the south west of well No. 173 of the Concordia Co. in which the water has been shut off. The Steaua is now preparing to drill there its No. 221. The Colombia Co. is now erecting a derrick to drill in a hand dug well 15 metres deep. The Concordia Co. has encountered and shut off another water bearing stratum in its No. 185 at 148 metres. No. 219, on the Parascheva plot, has reached 148 metres. Well No. 40 of the Trajan Co. on the Curatureanu plot has reached a depth of 130 metres.

Calinet.—The Concordia Co.'s famous well E_2, which was the first to attract general attention to Calinet, has had its yield diminished by the striking of oil in No. 213, and is now being cleaned out. Wells No. 205 and 213 of the same company maintain their yield at 40 to 50 tons each daily. The Steaua Romana's No. 209 is having eruptions almost daily, yielding between 60 and 70 tons of oil. The Steaua-Romana, Concordia, Colombia, Romano-Germana and Trajan Companies, and also Messrs. G. Stefanescu and Co, are all making good progress with the wells they have in drilling at Calinet, and an increased production is expected in the near future.

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ENGLISH COMPANIES.

This list is restricted to companies who have paid dividends or who are producers.

Company.	Capital Paid Up.	Value of Shares.	Latest Prices.
Assam Oil	£205,000	£1	$\frac{3}{4}$-$\frac{7}{8}$
Baku Russian Petroleum ..	£750,000 Ord.	£1	0/3-0/9
,, ,, ..	£650,000 $5\frac{1}{2}$% Pref.	£1	6d -1/0
Bibi-Eybat Petroleum Co. ..			5/6-6/6
Californian Oilfields	£385,000 Ord.	£1	$4\frac{7}{8}$-$5\frac{1}{8}$
Commonwealth Oil Co. Pref	fully paid (Prem.)		$\frac{3}{4}$-$\frac{7}{8}$
,, ,, Def..	£1 fully paid		$\frac{13}{16}$-$\frac{15}{16}$
European Petroleum.. ..	£550,000 Pref.	£1	1/0-2/0
,, ,, ...	£550,000 Ord.	£1	0/3-0/9
,, ,, ...	£376,000 Deb.	£100	68-72
Russian Pet. & Liquid Fuel ..	£500,000 $6\frac{1}{2}$% Pref.	£1	2/0-3/0
,, ,, ...	£600,000 Ord.	£1	2/0-3/0
Schibaieff Petroleum ..	£575,000 6% Pref.	£5	$\frac{3}{16}$-$\frac{5}{16}$
,, ,, ...	£575,000 Ord.	£1	0/6-1/0
Shell Transport & Trading ..	£2,000,000	£1	46/0-47/0
,, ,, ,, ..	£1,000,000 Pref.	£10	$10\frac{5}{8}$-$10\frac{7}{8}$
Spies Petroleum Company ..	£387,500	10s.	10/0-11/

RUSSIAN COMPANIES.

Company.	Nom. Value in Roubles	Quotations on Jan. 11th.	
		Lowest Roubles.	Highest Roubles.
Baku Naphtha Co.	100	325	327
,, ,, ,, (issue of 1908) 150 pd.	100	$168\frac{1}{2}$	169
Balakhany Naphtha Co.	250	—	—
Caspian Society	1,000	3,650	3,700
Mazout Co.	250	—	—
Melikoff, A. C.	250	—	—
Mirzoeff Bros.	250	—	—
Naftalan Co.	250	—	—
Naphtha Co. "Kavkas"	250	—	—
Naphtha Trading Co., A. I. Mantacheff & Co.	250	134	135
Neft Co.	250	—	—
Nobel Bros.	5,000	11,200	11,250
,, ,, ...	250	—	—
Rops and Co. V...	250	—	—
Russian Naphtha Co.	250	—	—
Society Mazout	250	—	—
Ter-Akopoff Co.	250	—	—
Tumaieff & Co., J. G.	250	—	—
Volga-Caspian Naphtha and Trading Co	250	—	—
,, ,, ,, (Second Issue)	250	—	—

SCOTCH COMPANIES

Supplied by Messrs. MACLEAN AND HENDERSON, STIRLING.

Company.	Capital Paid Up.	Value of Share.	Latest Prices.
Broxburn Oil Co., Ltd., Ord. 17/- pd	£235,000	£1	£2 3s. 0d.
Do. 6% Cum. Pref. ..	£100,000	£10	£12 8s. 9d.
Burmah Oil, Ord.	£1,100,000	£1	£4 16s. 0d.
Do. Pref.	£250,000	£1	£1 7s 9d.
Dalmeny Oil Co., Ord. (7 paid) ..	£37,800	£8 10s	£5 7s. 6d.
Do. 5% Pref. ..	£18,900	£7	£4 12s. 0d.
Lobitos Oilfields, Ltd. (£1).. ..	£275,000	£1	£1 5s. 0d.
Oakbank Oil Co., Ltd., Ord.	£170,000	£1	£1 17s. 9d.
Do. Pref. (fully paid)	£36,980	£1	£1 4s. 6d.
Do. Do. (10s. paid)	£63,020	£1	£0 18s. 6d.
Pacific Oilfields, Ltd. (£1)	£200,000	£1	£1 3s. 9d.
Pumpherston Min. Oil Co., Ld., Ord. (17s. paid)	£110,500	17s.	£12 5s. 0d.
Do. 6% Cum. Pref.	£100,000	£10	£13 10s. 0d.
Tarbrax Oil Co., Ltd. Ord. (£1 pd.)	£38,350	£1	£2 18s. 6d.
Do. 6% Cum. Pref.	£35,000	£1	£1 4s. 9d.
Young's Paraffin Co., Ltd., Ord. ..	£452,808	£4	£3 13s. 6d.
Do. "B" Deb...	£150,000	£100	£187 5s.

DUTCH COMPANIES.

Company.	Latest Quotations (per cent.)	Florins
Arnhemsche Petroleum Mij	—	1,000
Aurora ,, ,, (Deb. 5%)	78	—
Campina Poiana Mij.	—	—
Dordtsche Petroleum Mij. (Ord.)	150	—
,, ,, ,, (Pref.)	129	50
,, ,, ,, (Deb. $4\frac{1}{2}$%)	103	1,000
Gaboes ,, ,, ...	—	—
Holl. Rumeensche Petroleum Mij.	60	1,000
Int. Rum. Pet. Mij.	$18\frac{1}{8}$-$18\frac{3}{8}$	500
Java Petroleum Mij. (Ord.)	—	1,000
,, ,, ,, (Pref.)	11	—
Koninklyke Nederl. Pet. Mij. Shares	320	100
,, ,, Share certificates	$317\frac{1}{4}$	1,000
Mœara Enim Petroleum Mij.	149	100
,, ,, 1-1,000 Oblig. 5	—	250-1,000
"Moesi Ilir" Petroleum Mij.	—	—
Nederl.-Rumeensche Petroleum Mij.	$4\frac{1}{4}$	—
Nieuwe Ned. Petroleum Mij. And.	—	1,000
Oklahoma Petroleum Co.	$102\frac{1}{2}$	—
Oliebronnen in Hannover Mij.	80	—
Panolan Maatschappij Cert.	265	—
Perlak Petrol. Mij. (6% cum pr. A.)	$133\frac{3}{4}$	1,000
,, ,, (Common)	—	—
Sumatra-Palembang Petroleum Mij	$117\frac{7}{8}$	500
Tarakan Petrol Mij.	$28\frac{3}{4}$	—
Zuid Perlak Petrol. Mij. (Pref.)..	$137\frac{1}{2}$	—

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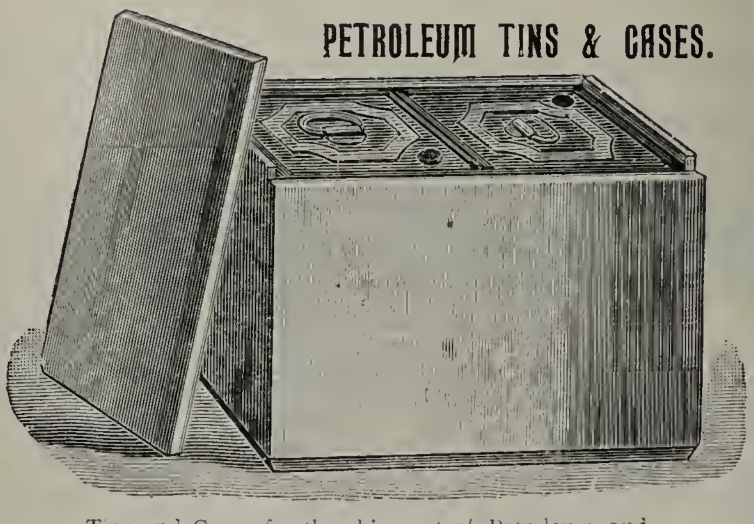

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THE
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SATURDAY, JANUARY 16, 1909.

THE WORLD'S PRODUCTION OF PETROLEUM IN 1908.

EVEN at this early period of the year, we are pleased to be able to furnish our readers with reliable data concerning the total production of petroleum throughout the oil fields of the world for the past twelve months. We have recognised all along that although such statistics are of the greatest importance in enabling one to gauge the extent of the progress in any particular country, the fact that until quite recently no accurate figures were published until the various Government reports were issued late in the year, tended to minimise the value of the statistics. During the past year, therefore, the REVIEW has month by month compiled various lists of the production of crude petroleum in the several petroleum fields, so that it might be in the position to give its readers some accurate information in regard to the subject, almost as soon as the year was completed, and we feel sure that the statistics and the carefully drawn conclusions here given will be appreciated.

Last year the petroleum fields of the world produced approximately 35,000,000 tons of crude oil—a record figure in the annals of oil production, exceeding as it does the production of 1907 by 2,000,000 tons, and that of 1906 by 10,000,000 tons. Thus each succeeding year, seeing as it does a gradual, and, let us hope, a permanent expansion of the uses of the products of petroleum, witnesses also an increasingly active and a successful search for crude oil. To-day quite a large army of petroleum producing companies are spread throughout the two hemispheres, finding very remunerative employment, and every passing year sees an enormously increased capital invested in the production of crude oil, and its subsequent refining and distribution. No accurate data can of course be obtained, shewing to what an extent new capital is constantly being placed in the petroleum industry, but, as an instance, even in England alone, the amount of new capital placed in petroleum enterprises last year reached the substantial figure of £2,000,000. All this tends to shew that as time goes on, the petroleum industry is firmly establishing itself the world over, and as the demand expands, so are the aims of those responsible for the production of crude oil turned toward increasing the output consistent with facilities and the subsequent demand.

The following table gives at a glance the world's petroleum production for the past three years:—

Producing Country.	1908 Tons.	1907 Tons.	1906 Tons.
America	22,000,000	20,000,000	14,000,000
Russia	7,500,000	8,000,000	7,000,000
Dutch India ..	2,300,000	2,200,000	1,500,000
Galicia	1,600,000	1,100,000	760,000
Roumania ..	1,100,000	1,000,000	880,000
India	600,000	550,000	500,000
Other Countries..	450,000	450,000	390,000
Total ..	35,550,000	33,400,000	25,140,000

It will, therefore, be seen that America not only maintains its lead as the greatest producing country in the world, but continues to advance at such a rate which far surpasses that of any other country. Its production for 1908 may be taken at 22,000,000 tons, or 2,000,000 tons in excess of the figures for the preceding year. We have no doubt that the total yield would have been considerably greater, had it not been for the fact that the petroleum industry in the Mid-Continental fields overgrew its bounds during 1907, and though superhuman efforts were put forward to take care of the oil above ground, and to create facilities for finding a quick outlet, many wells had to be shut down during 1908, or the abnormal state of affairs would have been intensified.

It is very gratifying to find that the older producing territories are keeping up remarkably well, while in those centres to which general attention has been directed of late, the production shews remarkable signs of growth. In California, with its last year's production of approximately 7,000,000 tons, the figures represent an increase of quite 20 per cent. over the yield of 1907, and yet this industry has only just started. To-day, one sees activity upon all sides, and simultaneously with the exploitation of the proven territories, an energetic search is being carried on in fields whose future is as yet problematical. Of Mexico, we cannot do more than say that the oil production is increasing by leaps and bounds, and in view of the remarkable productivity of the territory, leases are being taken up wherever possible.

In regard to Russia, the production remains at a very low ebb, and for 1908 it shews but small advancement upon the figures of 1905, while compared with the totals for 1907, there is a decrease. Somehow it seems as though the Russian industry cannot raise itself above the 38,000,000 poods per month. The past year has been singularly free from strife, yet one necessary feature has been markedly absent. There has been very little activity displayed by the producing firms, and drilling programmes have been cut down in a most injudicious manner. So long as due regard is not paid to the importance of continuously boring new wells, then one must naturally expect production to move upon the downward path, and we have the strongest evidence of this, in the production for last year, which is over thirty per cent. less than it was four and five years ago.

Of the remaining producing countries, we wish space allowed us to deal with these singly, as in each case the increase in output clearly points to progress. The Dutch Indies are steadily increasing their production, which is finding a ready outlet both east and west, while in Roumania, we may safely look forward to the future developments being of even greater significance than those of the past. Galicia has been producing oil regardless of the market, and the consequence has been that the country's industry is passing through a crisis, which, to both large and small, must be very serious. However, the Government now seems inclined to come to the assistance of the industry, and we but hope that this is one of those matters inseparable from an important branch of commerce in the infancy of its development.

For the future, we have every confidence. New fields are being opened out, and, in the light of recent experience, others, which have hitherto not been thought worthy of active development, are to-day yielding encouraging results. It may therefore be said that the petroleum producing industry in almost every quarter of the world is making real progress—progress which becomes more marked each passing year.

NIGERIA BITUMEN CORPORATION, LIMITED.

The Manager reports by cable as follows:—Borehole No. 5, putting in seven-inch casing. Borehole No. 6, depth 617 feet; increase 53 feet; formation, hard mixed sand rock. Borehole No. 7, depth 262 feet; increase 19 feet.

THE GREAT OIL GUSHER IN MEXICO.

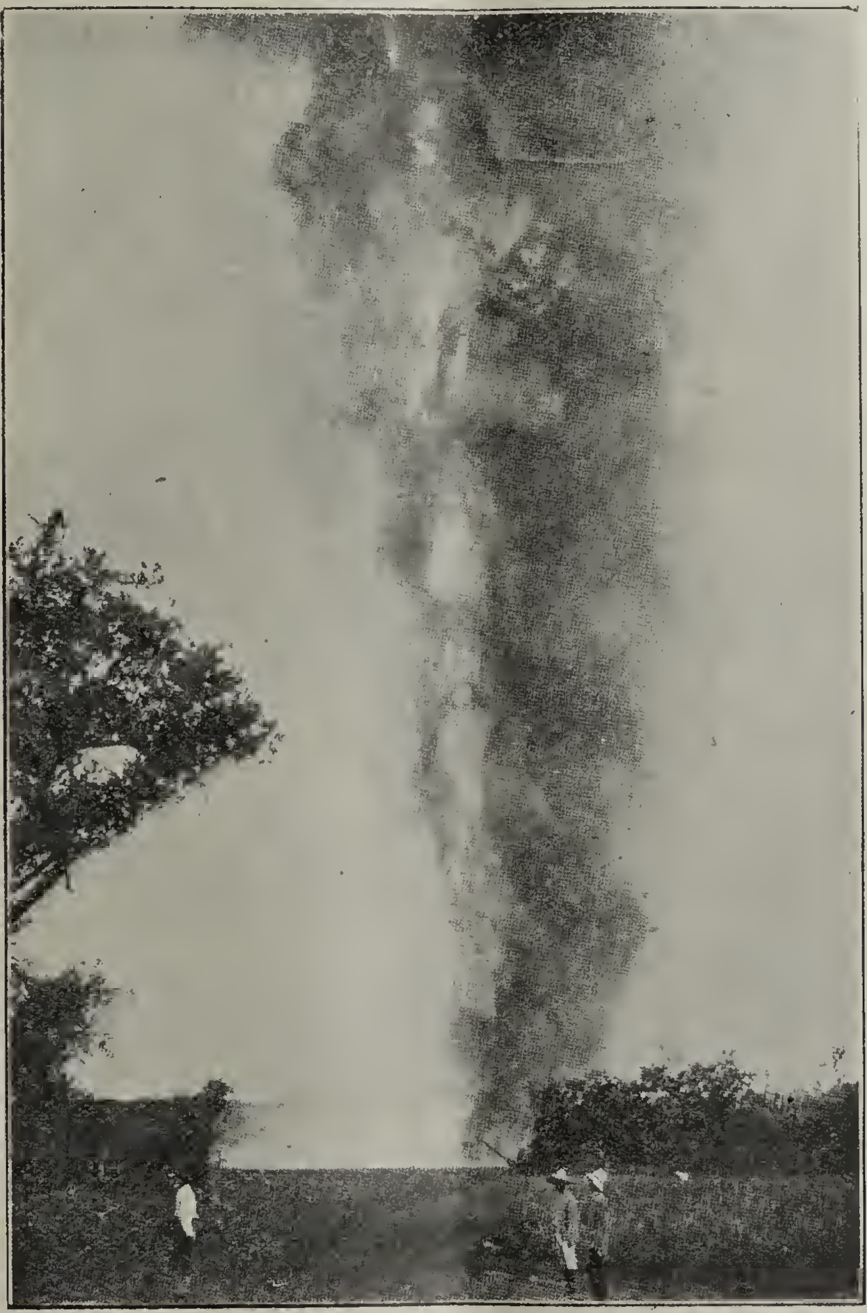
A Few Details Concerning Messrs. S. Pearson and Son's Remarkable Well.

From time to time last year we made special reference in the Review to the remarkable gusher which Messrs. S. Pearson and Son struck upon their property in Mexico, and which gusher was responsible for the loss of millions of gallons of oil.

The details, however, which have reached us concerning this phenomena, have been very meagre, until now the latest issue of the American *Engineering and Mining Journal* contains a special article dealing with the uncontrollable gusher, which by reason of the hitherto unpublished information it contains, is of great interest to all who follow Mexican developments.

The property upon which the gusher was struck is known as San Diego de la Mar, and is situated in the northern part of the State of Vera Cruz, about 75 miles by water from Tampico on the Tamiahua lagoon. This lagoon is separated from the Gulf of Mexico by a narrow strip of land less than a mile in width. The sub-soil rights to the lands were leased in 1901 by the Pennsylvania Oil Co. of Mexico, and a well was drilled on the property, but without result. In 1907 Messrs. S. Pearson and Son acquired the controlling interest in the Pennsylvania Oil Co., and the first well drilled by them came in at a depth of 2,005 feet, with a production of 5,000 barrels of oil daily. The second well they drilled, known as San Diego No. 3, came in last July at a depth of 1,824 feet. The drilling, it appears, for some time prior to the blow-out had been in the hard marl, when it suddenly passed into soft shale. After this formation had been drilled through about three feet, the internal pressure began to exert itself. This gradually became stronger, until in less than half an hour the well was flowing at the rate of 12,000 barrels daily, causing the ground round to tremble and open up in several places. One of these fissures was immediately underneath the boiler, having started by first throwing out gas and then coming in oil. The fissure suddenly burst into flames, the fire working its way toward the well. At the time a strong breeze was blowing, and so in a very short time the gas coming from the well ignited, and simultaneously the whole country surrounding the well was enveloped in a mass of flame. The flow from the well continued to increase in strength, until it is estimated it must have represented close upon 100,000 barrels daily.

At the time of the blow-out, there were over 1,800 feet of four-inch drill stem in the well, but soon this was entirely blown out, and nine days after the fire started the engineers on the spot estimated that the height of the flames were 1,000 feet over the well. In fact, the country was aglow, and from the well there rose one mass of flame said to 90 feet wide. The fire could plainly be seen two hundred miles at sea from the Gulf of Mexico, and the correspondent in the *Engineering and Mining Journal* gives it as a fact that a newspaper could be read at night twenty miles away by the flare of the flames.



The Oil Well Fire at its Height.

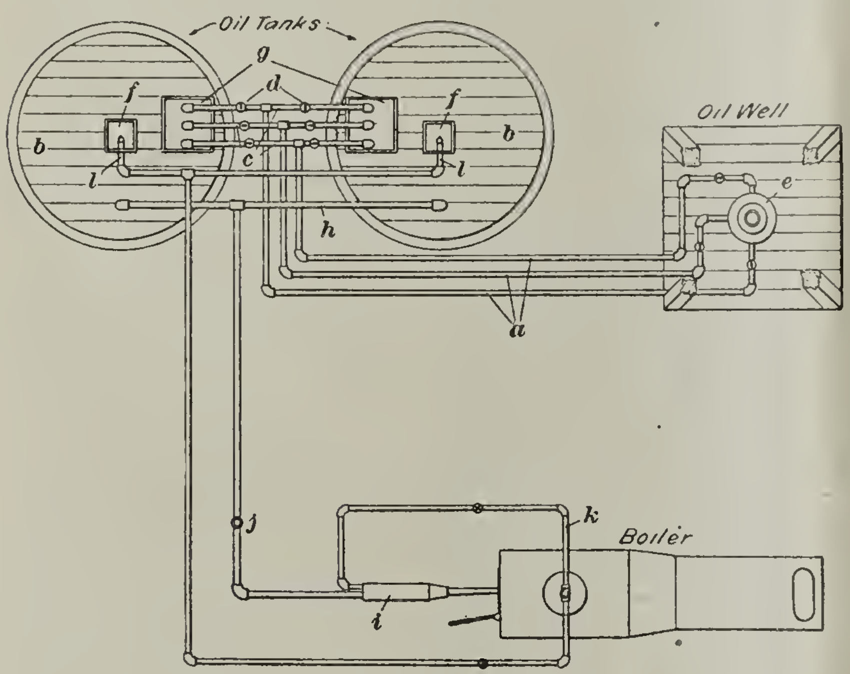
The first plan for the extinguishing of the flames involved the use of a drag, made of the heaviest plates from a 2,000-barrel steel tank, and these plates were rivetted together and weighted down with thirty tons of rails. Then steam winches and wire cable were used, and the drag drawn slowly over the mouth of the well.

But this idea had to be abandoned, for the mouth of the well became a crater. The second plan adopted was to sink an inclined hole at an angle of about 45 degrees with the idea of intersecting the burning well at about 300 feet from the surface, when a charge of nitro-glycerine was to have been discharged, in order to choke the flow, but a day or two later, the well tore itself loose, forming an immense crater, into which two acres of land fell at one time. Thus the second plan was abandoned. It was then decided to instal centrifugal pumps and to choke the well by pumping sand and gravel into it, and fifty-seven days after the fire had commenced this was successfully accomplished, the well at the time only gushing intermittently.

The Mexican Government sent out engineers and an entire battalion of 450 sappers to assist in extinguishing the fire, and to save the oil from the well.

THE USE OF OIL STORAGE TANK GAS AS FUEL.

In the American oil fields where the best grade of Pennsylvania amber oil is produced, there is a large volume of gaseous vapours constantly rising from the oil storage tanks located near the wells. A scheme has been adopted by some of the operators, says Mr. F. W. Brady in the current issue of *Mines and Minerals*, for using this gas to fire the boilers that furnish the steam for the well operation. In order to properly care for the wells in some of the localities, it is necessary to keep up steam all the time in the boilers, which is easily done where gas is available for fuel. The general layout for using the gas at atmospheric pressure for firing a locomotive type of boiler is shewn in the illustration, which represents a two-tank outfit. Three 2-inch delivery pipes *a* connect the well-casing head *e* with the tanks *b*. By the use of three horizontal pipes *c* with plug valves *d* the flow of oil can be delivered into either tank as desired. A plug valve is also placed in each of the pipes near the casing head *e*. The tanks have covers made of common-grade pine boards, and there are two openings, one for the gas chimney *f* and one for the receiving box *g*. The gas chimney is about 12 inches square and from 10 feet to 16 feet high, and is made of boards, the receiving box is about 18 inches square, and serves as a convenient receptacle for the elbows and nipples used on the ends of the delivery pipes for deflecting the oil into the tanks. A loose cover usually consisting of a gunny sack is placed over this box when using the gas for firing the boiler. The gas chimney serves to carry the surplus gas to a single point at an elevation where it can be dissipated in the air to the best advantage for the safety of the outfit.



For drawing off the gas from the top of the tank to the boiler furnace, a pipe *h* with an elbow and a short nipple on each end connecting with the gas space over the oil in the tanks is laid flat on top of the tank covers. A gas supply pipe leads from the middle of this pipe to the inspirator *i* near the boiler, and has an easy working check-valve *j*. A steam pipe *k* leads from the dome of the boiler to the inspirator, the steam being used to draw the gas into the furnace. A small amount of coal or a small gas flame is kept burning in the furnace all the time. This is to insure that the gas from the inspirator will be ignited, should the supply be irregular or stop temporarily, and thus prevent an explosion from an accumulation of gas an air in the furnace.

The boilers in the oil country, continues Mr. Brady, stand in the open uncovered and unprotected, and the entire equipment is set up in the easiest and cheapest manner. Where gas is burned a smoke stack is seldom used on the boilers and the furnace door is just as likely to be wide open as it is to be closed. A steam jet *l* is sometimes put into the base of the gas chimney so that should lightning start a gas flame at the top of the stack this flame can be blown out easily and with the least risk to the operator.

PRODUCTION OF CRUDE OIL IN BORYSLAW AND TUSTANOWICE DURING OCTOBER AND NOVEMBER, 1908.

The total production of crude oil at Boryslaw and Tustanowice during October and November was as under:—

	October. Tons.	November. Tons.
Boryslaw	21,960	18,930
Tustanowice	141,170	136,980
Total	163,130	155,910

The production of the leading producing firms at Boryslaw and Tustanowice was as under:—

	October. Tons.	November. Tons.
Boryslaw—		
Albert	880	1,000
Galicia	1,760	1,270
Johanna	1,770	1,680
Kornhaber and Segal	1,000	450
Ludwig	1,330	1,040
Natan	1,650	1,650
Ratoczyn Boryslawsky	3,600	3,280
Tustanowice—		
Banzaj	2,280	9,560
Berthold	1,340	1,020
Boxall and Maisel	—	6,030
Clay I. and II.	4,330	2,030
Dembowski	—	2,220
Elgin	1,200	1,700
Erdoelwerke Galizien	6,130	1,350
Faust	2,010	4,710
Gal. Spolka Naftowa	2,800	2,500
Hala	1,040	1,080
Hermann	2,200	1,750
Iadwiga	1,180	1,050
Iozef	1,150	850
Ignacy	2,940	2,650
Isabella	3,200	3,200
Kalifornia	250	3,050
Karpathen A.G.	12,280	9,500
Kometa	1,670	1,410
Lilian	1,420	1,070
Litwa	1,240	1,980
Mercedes	80	1,100
Montan	1,640	6,840
Mukden I.	3,840	2.310
Nahlik	1,490	960
Oil City	20,760	13,810
Parnes	4,000	2,690
Pluto	14,010	13,440
Ressegnieur	1,110	1,030
Salo	1,220	990
Sycylia	1,280	1,060
Thurn-Taxis (Annen)	7,360	5,920
Trunkwalter	1,350	1,260
Triumf	1,380	1,440
Tsuschima	4,070	2,670
Urycz Co.	5,530	3,160
Wilno	1,820	1,630
Wygoda	1,000	320
Wladyslaw	2,550	2,480

Important . . .
Recent . . . . .
Developments.

THE OIL FIELDS OF TRINIDAD.

(BY A CORRESPONDENT.)

During the last few years the well-known indications of oil in Trinidad have been the subject of a geological investigation undertaken by the Trinidad Government, and the reports made, which have from time to time been referred to in this journal, have led several groups to test the commercial worth of the oil regions. Five or six years ago, exploration on a large scale was undertaken by a Canadian group in the South Eastern portion of the island near Guayaguayare Bay, and several wells sunk to depths not exceeding 1,000 feet gave productions of oil. The oil was analysed by the Government Geologist and the Imperial Institute, with the results shewn below:—

Well No. 1—Guayaguayare.

Temperature at which Distilled.	Fractions expressed as volume per ct.	Sp. Gr. of Fractions.	Remarks.
17–120° C. ..	10	0·762	These three fractions constitute the "light petroleum," of which 23 per cent. is present. This material absorbed 1·15 per cent. of its own weight of bromine and had a flash-point of 1° C.
120–140° C. ..	9·4	0·798	
140–150° C. ..	3·6	0·816	
150–180° C. ..	6·0	0·832	These four portions together form "kerosene," of which 39·5 per cent. was obtained; it absorbed 7·65 per cent. of its weight of bromine and "flashed" at 48·5° C.
180–210° C. ..	8·0	0·848	
210–245° C. ..	8·5	0·878	
245–292° C. ..	17·0	0·906	
Above 300° ..	26·0	0·929	The portion boiling above 300° C. forms "Heavy" oil, of which 33 per cent. was obtained; it absorbed 34·5 per cent. of its weight of bromine.
Under reduced pressure ..	7·0	0·921	
Coke and Loss.	4·5	—	

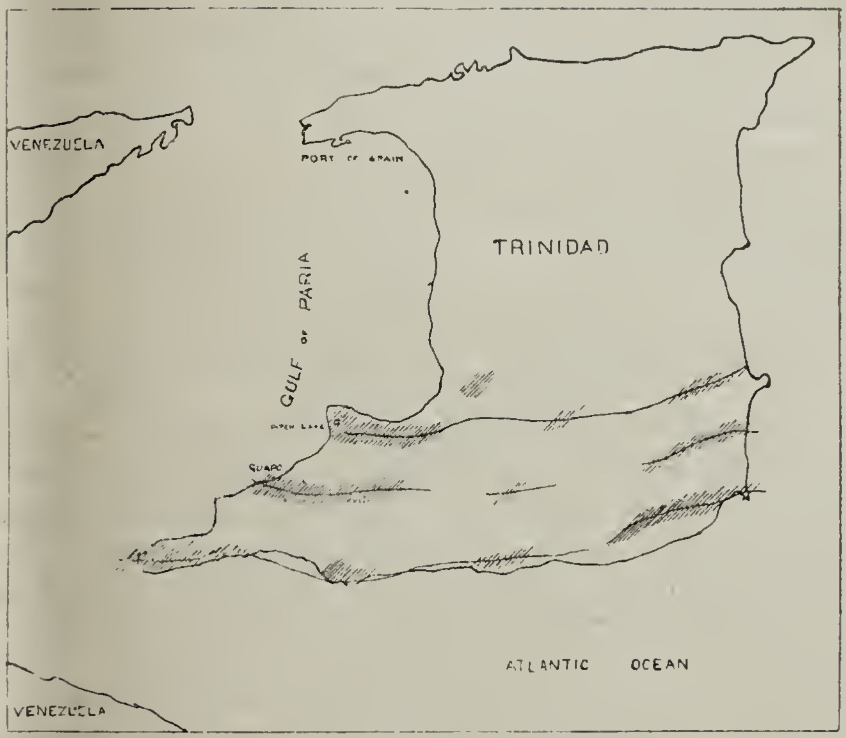
Well No. 2—Guayaguayare.

To 150° C. ..	12·0	0·771	Equal to 12 per cent. "light petroleum." This absorbed 1·4 per cent of its own weight of bromine and had a flash-point of 1° C.
150–200° C. ..	7 8	0·819	Equivalent to "Kerosene," 30 per cent having a "bromine" absorption 7·44 per cent, and flash-point 38° C.
200–250° C. ..	10·4	0·885	
250–300° C. ..	11·8	0·890	
Above 300° C..	26·6 (Liquid at 17° C	0·914	Equal to 26·6 per cent of heavy oil.
Under reduced pressure ..	20·0 Solid, M.P., About 24° C.	0·924	Equivalent to 20·0 per cent. of solid paraffin or paraffin scale melting at 24° C.
Coke and Loss.	11·4	—	—

Well No. 4—Guayaguayare.

To 150° C. ..	1·2	—	Light petroleum, with small quantity of water.
150–300° C. ..	21·0	0·881	Equal to 21 per cent. of "kerosene," having a "bromine" absorption of 6·7 per cent. and a flash-point of 84·0° C.
Above 300° C..	48·2	0·916	Together forming 73·2 per cent. of "heavy oil," the first portion having a bromine absorption of 16·07 per cent. and the second 52·64 per cent.
Under reduced pressure ..	25·0	0·917	
Coke and Loss.	4·6	—	—

The work of the Canadian group was undertaken under trying conditions of climate, which led to much sickness amongst the men, the whole area being clothed in a dense tropical jungle through which roads had to be cut.



There are several important anticlines in the southern part of Trinidad, to which section of the island the oil deposits are confined, and on each there is a profusion of oil seepages and mud volcanoes, near the crests or along outcropping oil beds. Continued seepages of oil

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have led to the formation of great deposits of asphalt, which have been found of little practical use on account of the much greater and purer accumulation of this material in the renowned Pitch Lake.

During the last year important exploration work has been conducted by the New Trinidad Lake Asphalt Co. in the vicinity of the Pitch Lake, where, in October last, their efforts were rewarded by the striking of a flowing well, which spouted for a while above the summit of the derrick. The well was eventually capped and large orders were placed in the United States for additional drilling plant to extend the operations. The operations were to some extent the result of the keenly felt necessity for fuel for the manufacture of "Epure," a product produced by melting the crude pitch and so driving off suspended water and allowing sand to settle. Either local wood or imported coal were employed, both of which were expensive, the former on account of the scarcity of hard wood in the forests suitable for fuel. However, all expectations have been exceeded, and the company will now proceed with oil development in addition to asphalt extraction. Closely following these results was the successful issue of exploration work undertaken by a private company, the Trinidad Petroleum Co., some five miles away from the Pitch Lake, near Guapo. During the last two years oil had been struck in a number of wells, but in November last an important flowing well was struck near the crest of the anticline at a depth of only 700 feet. The well flowed freely and periodically even before being cleaned out, and eventually it was capped. When capped the pressure rose so high that oil forced ts way to the surface between the casings, and a few tons of oil had to be periodically allowed to flow to waste. Other wells are being sunk in the vicinity, and their success is a foregone conclusion, especially as the thickest oil sands have not yet been reached. Earthen tanks are being excavated in which to temporarily store the oil, whilst other provision is being prepared.

The success of drilling in two districts within the Gulf of Paria has demonstrated the wide distribution of oil in the La Brea and Guapo districts, and it is quite certain that neither operating company will remain idle in face of such promising and conclusive results.

The importance of Trinidad as an oil producing country cannot be too much over-estimated, as it is geographically convenient and nearer to Great Britain than any of the American oil-fields or those of the east and has advantages over Continental fields where long overland carriage journeys have to be contended with in the export trade.

AMERICAN NOTES.

A New Company in the Illinois Fields.—The Kewanee Oil and Gas Co. has recently been launched in the Illinois field, and its land in Lawrence county will be developed immediately.

The New Line to the Gulf.—The Prairie Oil and Gas Co has recently filed the necessary survey maps shewing the route of the new pipe line from the Oklahoma fields to New Orleans. The total length will be 549 miles, and the line will take practically a straight course.

Extension of the Coalinga Field.—The Coalinga field is being gradually extended, and at present that portion of territory midway between the Coalinga and the McKittrick fields is claiming much attention. Oil men say that very soon it will be found that the two fields are really joined.

The Florence Field.—In spite of inactivity of drilling operations, the Florence field in Colorado is holding up well with regard to productton, some of the wells drilled nearly twenty years ago now being good for one hundred barrels daily. A new strata has been struck at a depth of 3,150 feet.

The Santa Maria Field.—Great activity has been shewn in the Santa Maria field during 1908, and of the 53 wells which were begun during the year, 13 have been brought in producers. It speaks very favourably of the field and the care with which drilling operations are carried on that during the twelve months there was only one well abandoned.

A Gigantic Refining Plant.—Operations have now been commenced upon what is said to be the largest refinery in the world, in Linden township, N.J., owned by the Standard Oil Co. When the refinery is in full working order, it is said that at least 7,000 men will be placed in permanent employment. The bulk of the deliveries from the refineries will be by water.

The Petroleum Possibilities of Mexico.—We learn from a semi-official source that Messrs. S. Pearson and Son has placed an expedition in Mexico to make a geological survey of all those States in which oil is likely to be found. The expedition is equipped to remain out for six months, and will, during its labours penetrate a district of which little is at present known. The expedition is in charge of Messrs. A. Stoop, F. Grimley and J. Cisneros.

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MISCELLANEA.

JAPAN REFINERIES OPERATE WITH CALIFORNIA CRUDE.

The Nan Boku Oil Co., of Japan, which is capitalised at approximately £1,000,000, and is an adjunct of the Toyo Kisen Kaisha, has recently completed a refining plant with a yearly capacity of 1,500,000 barrels. This refinery has been utilising Californian crude since its completion, but now, with a view to prevent the increasingly large importation of Californian crude oil, the Government of Japan recently raised the import duty from 20 to 50 per cent. Owing, however, to the action of the officials of the Nan Boku Oil Co., the Government has suspended the increased taxation for one year in order that the company may demonstrate to them that it is beneficial to the interests of Japan that she should have as much Californian oil as possible.

GROSNY PRODUCTION DURING OCTOBER.

The total production of crude oil at the Grosny oil fields in October amounted to 4,817,345 poods, against 5,540,142 poods produced in September. Spouters in October yielded 1,394,430 poods, against 2,330,645 poods in September.

The production of the various firms was as under:—

	October Poods.	September Poods.
Akhverdoff Co.	2,493,000	2,643,800
Spies Petroleum Co., Ltd. ..	691,425	1,128,390
Executors of Maximoff	587,900	646,400
Kasbeck Syndicate, Ltd... ..	525,855	384,720
Anglo-Russian Maximoff Co., Ltd.	302,500	300,000
North Caucasian Oilfields, Ltd. ..	139,590	108,300
Russian Standard	108,685	105,225
Tcheleken-Daghestan Co. ..	72,710	76,900
Moscow Naphtha Co.	51,180	67,360
St. Petersburg Co.	24,000	24,000
Caspian and Black Sea Society ..	21,400	21,500
Kholodovsky	1,000	1,000
MacGarvey..	..	32,547

The production by spouters was obtained by the following firms:—

	October Poods.	September Poods.
Akhverdoff Co.	1,013,000	1 340,000
Spies Petroleum Co., Ltd. ..	95,640	603,265
Executors of Maximoff	140,000	200,000
Kasbeck Syndicate, Ltd... ..	120,990	137,200
North Caucasian Oilfields, Ltd...	24,800	26,200

PETROLEUM IN MADAGASCAR.

In a recently published report, the American Consul writes from Tamatave that petroleum has been discovered in Madagascar, the particulars being as follows:—

The oil occurs in the nature of several springs which occur in the regions of the Manambolo and Manambo rivers, on the west coast of the island, and while there has not yet been any official announcement of concessions being granted for oil prospecting, I have been reliably informed that there are several concession holders (names and addresses are obtainable from the Bureau of Manufactures). Thus far no serious work has been done on the fields, but it is believed that extensive operations will commence shortly, and the prospects for selling American drills are said to be good.

LATEST DETAILS CONCERNING THE CADDO FIELD.

Few fields are at present commanding more general attention than the Caddo field of Louisiana. The field has now passed through its experimental stages, and to-day the area which is being drilled is larger than that of any other field either in Texas or Louisiana. The field is now four years old, the first excitement being caused by the bringing in of the Caddo Gas and Oil Co.'s well and that of the Gulf Refining Co. Since that time several strong companies have entered the field, and the developments have proceeded actively, the daily production now being put at 4,500 barrels. A number of pipe lines touch the field, and with the completion of others at no great distance away, it is expected that the Caddo field will figure more prominently upon the map of American producing regions.

THE STANDARD OIL COMPANY AND CALIFORNIA.

We have it upon good authority that the Standard Oil Co. has secured control of the bulk of the stock in the Union Oil Co. of California, and this announcement will in all probability be made at the forthcoming meeting of the Union Co., when several important changes are suggested in the *personnel* of the board. The Union Oil Co. has year by year become an increasingly important factor in regard to the Californian industry, and to its enterprise was the construction of the Panama pipe line due. The merging of interests of the two concerns will naturally remove from the field of competition a company whose policy in the past has been to grow upon sound business lines, so that, by its strength, it could hold its own anywhere.

ROUMANIAN PETROLEUM EXPORTS DURING NOVEMBER.

The following are the figures of the exports of petroleum products from Roumania in November 1908:—

Destination	Crude oil, Residuals, Gas oil, etc. Tons.	Refined oil and Distillate Tons.	Benzine. Tons.	Total. Tons.
France	106	3,186	10,257	13,549
Italy	6	4,466	2,177	6,649
Egypt	—	3,845	—	3,845
Turkey	48	2,856	17	2,921
Bulgaria	92	369	65	526
Germany	77	—	320	397
Austria-Hungary ..	63	—	—	63
Belgium	30	—	1	31
Servia	2	—	—	2
Greece	—	—	1	1
Total: November 1908	424	14,722	12,838	27,984
,, ,, 1907	1,017	20,611	1,037	22,665

The routes by which the exports in November were directed were: Constantza, 26·980 tons, Burdujeni 351 tons, and Cernavoda, 477 tons.

PETROLEUM IMPORTS INTO GERMANY.

STATISTICS FOR NOVEMBER.

The following were the imports of petroleum products into Germany during November :—

	Tons.
Illuminating oil	111,801
Lubricating oils	15,291
Benzine	10,712
Gas oil	2,586
Crude oil	1,647
Residuals	26
Turpentine substitutes and other mixtures ..	39
Total	142,102

The imports from the several producing countries in November were :—

	Tons.
U.S.A.	99,760
Austria-Hungary	20,559
Russia	11,043
Dutch India	7,927
Roumania	2,257
Other Countries or of unknown origin	556
Total	142,102

The exports of petroleum products from Germany, in November, were :—Lubricating oils, 894 tons ; residuals, 100 tons ; illuminating oil, 145 tons ; benzine (refined), 412 tons ; total, 1,551 tons.

OZOKERITE PRODUCTION IN GALICIA.

The output of ozokerite in Galicia, where the largest deposits of this mineral are situated, is progressing satisfactorily. Notwithstanding the good demand for this article from foreign markets which has prevailed lately, no changes have so far occurred in prices and the general tone of the market. Ozokerite with a melting point of 70°-71° C. is quoted 125 to 127 kronen per 100 kilos. ; one with a melting point of 66°-67° C., 122 to 123 kronen ; and one with a still lower melting point, 98 to 102 kronen delivered at Boryslaw.

Although ozokerite deposits are known to exist in many parts of Russia and imported ozokerite has to pay a very heavy duty, Russian industries using this product are entirely dependent on Galicia for their supplies. Owing to the difference in the respective import duties the bulk of the Galician ozokerite coming into Russia is imported in its crude state and is refined there and turned into ceresine. In Galicia the highest quality of ceresine is quoted 254 kronen per 100 kilos. ; the cheaper yellow grades are quoted : 132 to 138 kronen, whilst paraffin scale with a melting point of 49°-51° C. is sold at 50 kronen per 100 kilos.

PETROLEUM IMPORTS INTO THE VARIOUS PORTS OF THE UNITED KINGDOM DURING 1908.

From month to month last year we published tables giving the imports of petroleum products into the various ports of the United Kingdom.

The following table constitutes a complete record of shipments into those ports for the whole of the year, the total shipments of all products being 333,670,324 gallons. These were distributed as under :—

Port.	Illuminating.	Lubricating.	Residuals.	Gas Oil. (Solar.)	Benzine.	Fuel Oil.	Other Descriptions.
Aberdeen	71,400	4,330	—	—	—	—	—
Barrow...	3,342,310	—	—	—	7,394,560	615,630	—
Belfast	7,102,820	41,080	—	1,619,000	—	—	—
Bristol	22,229,190	2,462,030	559,570	1,816,750	—	1,267,200	347,500
Cardiff	4,336,420	98,180	—	—	—	—	4,000
Cork	4,250	810	—	—	—	—	1,880
Dover	—	320	—	—	—	—	—
Dublin	7,390,200	760	—	2,828,310	—	—	—
Dundee	11,400	30,145	—	—	—	—	—
Glasgow	53,230	3,550,045	20,030	—	—	—	252,190
Gloucester	—	2,480	—	—	—	—	—
Goole	—	4,450	—	—	—	1,200	230
Grangemouth	583,220	227,660	—	—	—	—	177,080
Grimsby	—	39,230	—	—	—	—	—
Hartlepool	—	3,030	—	—	—	—	—
Harwich	—	12,865	—	—	—	—	—
Hull	11,259,300	3,281,750	2,240	511,240	108,320	—	142,140
Leith	303,030	444,110	8,000	—	—	—	—
Lerwick	1,273,340	550	—	—	530	—	—
Liverpool	7,521,580	12,051,785	473,405	8,555,690	307,320	201,350	209,180
London	79,011,390	13,886,479	405,950	39,789,440	31,377,800	3,627,320	854,820
Manchester	20,738,970	10,698,110	288,710	7,485,390	—	922,520	114,890
Middlesboro'	—	27,000	—	—	39,950	—	—
Newcastle	5,000	296,610	—	—	—	—	33,920
Newport	—	61,390	—	—	—	—	10,000
Plymouth	655,900	4,120	582,290	404,160	—	—	—
Shoreham	—	—	—	78,200	—	—	—
Southampton	672,000	208,490	—	—	—	4,860	—
South Shields	826,600	65,400	—	—	—	444,750	7,360
Sunderland	3,173,210	1,031,770	—	—	—	—	—
Swansea	—	33,560	—	—	637,670	—	3,480
Totals	170,564,760	48,568,539	2,340,195	63,088,180	39,866,150	7,083,830	2,158,670

The Geological Formation of the Appalachian Fields.

ANOTHER VALUABLE GOVERNMENT REPORT.

Previous work of this kind has demonstrated that there are three primary factors which govern the accumulation of oil in the rocks in the Appalachian fields. These are (1) the conditions of the rock as to porosity, (2) the area of complete saturation by water of the oil-bearing stratum, and (3) the geologic structure of the rocks.

The condition of many of the sands changes within short distances from loose and porous sands to closely cemented hard rocks entirely impervious to oil and water in large quantities. Some sandstone beds are of the same texture over large areas, both as to the size of the solid particles and as to the matrix, which combines the separate grains. In others, although the size of the separate grains remains relatively the same, the cementing material changes from place to place, and in this way the relatively porosity of the rock is changed. Some sandstone beds contain lenses of conglomerate in which the separate particles are of considerable size, loosely held together, thus forming a condition of great porosity. A knowledge of the general characteristics of a particular sandstone bed is gained only by test wells. In the Appalachian oil field the peculiarities of the principal oil-bearing sands are pretty well known.

The condition of saturation with water is not the same in different sands. Experience has shewn that the older of the lower beds in the Appalachian field contain a smaller area of completely saturated rock than the upper or younger sands. The lowest sand seems to be almost entirely dry, only the very lowest points in the centre of a structural basin shewing any considerable quantity of salt water. Above these lower rocks each succeeding stratum of sandstone has a larger area in which it is saturated with water. In regions where the sand rock is not entirely saturated there may be separate areas of saturated rock in each structural basin, the upper limits of which are at the same elevation in different structural basins.

The effect of geologic structure on the accumulation of oil depends on the condition of saturation of the oil-bearing stratum.

If small quantities of oil and gas are in a dry, porous rock at different points, the oil will move down as long as the slope is sufficient to overcome friction and capillary attraction. The gas will diffuse with the air or water vapour contained in the pores of the rock.

Oil and gas in a porous rock that is completely saturated with water will be forced up to the top of the porous stratum by the difference in the specific gravity of the oil and the water. The oil and gas will accumulate in the upper part of the rock if the porous stratum is level, but if it dips sufficiently to overcome friction the particles of oil and gas will gradually be forced up the slope, the gas with its much lower specific gravity occupying the higher places.

In places where the porous rocks are only in part completely saturated, a combination of these two actions will take place. The oil above the line of complete saturation will run down to that line and the oil below will be forced up to the top of the completely saturated portion.

The sand spoken of as porous may not be so at all points. If in some areas it is impervious, those areas will tend to limit the movement of the oil and gas through the rock. Although a short distance away the the same stratum may be porous, it must from an oil standpoint be considered a separate and distinct porous body, unless the area of impervious rock is so situated that the oil can readily move laterally around it.

In dry, porous rocks the principal points of accumulation of oil are at the bottom or near the bottom of the synclines, at the lowest points of the porous medium, or at any points where the slope of the rock is not sufficient to overcome capillary attraction and friction, such as structural terraces or benches. In porous rocks that are completely saturated the accumulation of both oil and gas will be in the anticlines or along level portions of the structure. In completely saturated rocks of small area the accumulation should occur at the highest point of the porous medium, and where stops or dams of impervious rocks exist in a generally porous stratum, the accumulation should occur below such impervious stop, which is really the top limit of the porous rock. In porous rocks that are only partly filled with water, the oil accumulates at the top limit of the saturated area. This point may be anywhere with reference to the anticlines and synclines.

The condition most generally found is that the rocks are saturated only in a portion of their volume, in which case accumulations of oil may occur anywhere with reference to the geologic structure, though they are more likely to be on terraces or levels, as these points are favourable to accumulation in both dry and saturated rocks.

Under all conditions the most profitable location for the accumulation of gas is in an anticline, though small folds along the side of a syncline may capture and hold a supply of gas, or the rocks may be so close grained that gas cannot travel to the anticline, but must remain in greatest volume close to the oil accumulation.

In the Flushing quadrangle the Berea sand lies in the same structural basin as in the south-eastern half of the Cadiz quadrangle. In that portion of the Cadiz quadrangle it was found to be completely saturated to an elevation of about 270 to 280 feet below sea level. This is equivalent to an elevation of 1,720 to 1,730 feet, as the contours on the Flushing quadrangle are numbered. This is higher than any portion of the sand in the Flushing quadrangle, except a very small area on top of the Smyrna anticline. The conditions, therefore, to be considered in this area are those of complete saturation. Under these conditions the oil should accumulate just below the gas on the crest of the anticlinal ridges and upon terraces at the top of steep breaks.

Only three oil pools have been discovered in the Flushing quadrangle. The Uniontown pool, in Wheeling township, on the east edge of the quadrangle, extends eastward into the St. Clairsville quadrangle for a short distance. This pool is located on a large structural flat or terrace, only a small portion of which is covered by it. The pool appears to be well defined within the quadrangle by dry holes. To the south-east the structure shews a descent of about 40 feet. This is not favourable for the accumulation of oil unless a steep slope of some magnitude exists in the St. Clairsville quadrangle.

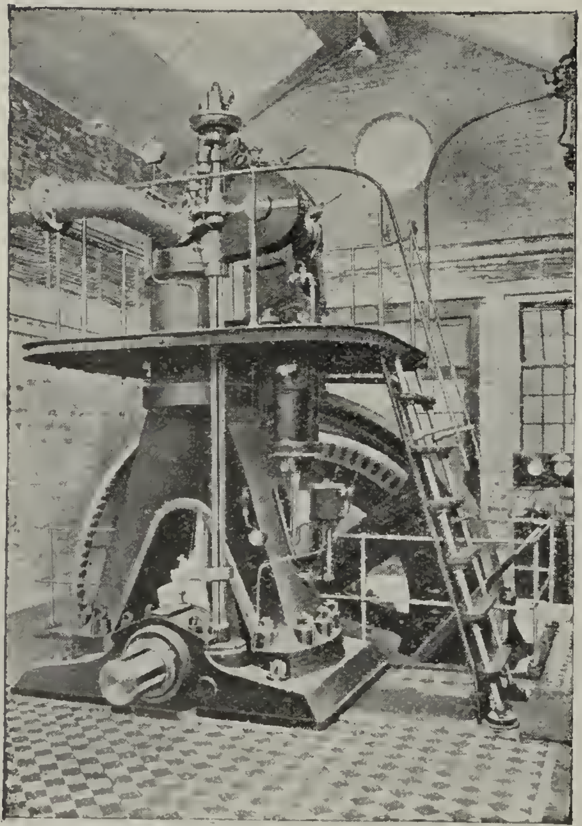
In the south-wesern portion of the quadrangle is the north end of the Barnesville pool. This accumulation is on a slope as shewn by the contours. From the separate well records, however, a very narrow terrace can be recognised. The direction of the pool is along the strike of the rocks for one to two miles to the south, and then to the west, the elevation of the sand differing by only a few feet in all wells where oil was found.

The third pool in the quadrangle is at Oakgrove. This is the only accumulation so far discovered in the quadrangle that could have been foretold by a knowledge of the structure prior to the drilling of the wells. The location of the pool is upon a flat near the top of the Smyrna anticline. All wells so far developed are small, and a number of dry holes are close to the producing wells. The wells are not in the best theoretical location for large production. The eastern side of the anticline along the Guernsey-Belmont county line in sections 32 and 33 appears to be the most favourable territory from a structural standpoint. From this point to the east is a strong dip of 160 feet. Near the top of this slope is the theoretical location for oil accumulation. The flat on the structural nose in the southern part of section 31, Flushing township, Belmont county, looks favourable, and is certainly worthy of a test well. North of the village of Fairview, in the northern part of section 2, Oxford township, Guernsey county, is a structural dome in which there is probably an accumu-lation of both oil and gas.

North of the Morristown is a very low dome, including all of section 21, Union township, Belmont county. The position of this dome is established by elevations on a number of the upper coal beds. It is probable that this feature extends down to the Berea sand. If the map is a true representation of the oil sand, this dome is a favourable point for both oil and gas. On its western side a number of wells have been drilled which produced gas from the upper sands. Wells Nos. 81 and 98 were drilled to the Berea sand and reported dry. They should not, however, condemn the entire area.

In the northern part of section 10, and southern part of section 11, Athens township, Harrison county, is represented an anticlinal dome whose northern basis is 20 feet or more. This feature is established by levels on the Meig's Creek coal. The conditions as represented should be favourable for both oil and gas.

Along the north edge of the quadrangle, in sections 1, 3 and 8 of Nottingham township, Harrison county, is an anticline, and to the south of this ridge near Cassville is a second anticlinal fold. These features are not prominent, but they are important owing to the slight northward dip of the formation. This northward dip is well established by levels on the Pittsburgh and Meigs Creek coals. The main or northern anticline is a direct extension from the Moholland oil pool, which lies one mile to the north-east in the Scio quadrangle. This pool was discovered and partly developed during the summer of 1906. The crest of the anticline through the sections mentioned is favourable territory. The secondary anticline to the south is detrimental to the chances of oil on the main ridge, as its own dome may have trapped the oil.



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The American Oil Market.

New York, Week ended Jan. 2nd.

The holiday season does not appear to have occasioned any check to the activity of operations in the fields producing the higher grades of petroleum, and the returns are generally of more favourable significance than those of the former week. The explanation is found in the fact that operators are keen to complete as much of the prospective work as possible before the unfavourable winter conditions are experienced. West Virginia occupies a commanding position in the week's developments, the new production shewing a daily average of 1,320 barrels from twenty-nine oil wells, against 715 barrels from twents-four wells in the producing class previously recorded. The best contributing sources to the total for the current week were encountered in Ritchie county, four completions aggregating 385 barrels, and in Monongalia county, where a well of the gusher type, yielding 350 barrels a day, was drilled. Some of the earlier producers of Ritchie county were reported to be maintaining an output in the neighbourhood of 200 barrels a day. Developments in Roane county were of a more encouraging character, the six wells drilled during the week giving a total of 180 barrels. One of the completions came in at the rate of 75 barrels a day in advance of the producing limits. Lincoln county was the scene of continued activity, says the *Oil, Paint and Drug Reporter*, but the wells were of no more than average capacity. Brooke county still attracts attention chiefly within the Holliday's Cove formation, which shews prolific resources. Despite a material gain in completed work in South-western Ohio during the week, the new production is nearly one-half of that of the former period, twenty-three of the wells being in the duster class. Operations in Columbiana county received a setback by failures to find an extension to some of the more promising shallow sand developments. In Muskingum county all of the seven wells completed were reported dry, but some of them shewed a light gas pressure. In the Mingo pool of Jefferson county dusters proved the rule. Advices from the Lima field of North- western Ohio and Indiana shew a gain in new production in both sections. The most creditable returns were encountered in Van Wert county in North-western Ohio, one completion indicating a 150-barrel well. In the Briant field of Jay county, Indiana, was drilled a 175-barrel producer. The holiday season occasioned a slight abatement of drilling in the Kentucky fields, but a completion of unusual importance was reported in the Parmleysville district of Wayne county, the initial flow shewing a capacity of 100 barrels daily, with evidences of permanency. The well is the second test considerably in advance of the defined field, and will undoubtedly stimulate operations in the vicinity. Another wildcat venture in the Turkey Rock neighbourhood, in the same county, yielded 40 barrels with the first day's pumping. A slight gain is recorded in Illinois operations, with a proportionate increase in new production. Crawford county was the centre of the keenest activity, and results apparently justified the prosecution of drilling. Some important transactions in petroleum territory are reported to be pending in the Mid-Continent field. Wildcatting in the southern part of Oklahoma attracts considerable interest, but no definite results have as yet been reported. The north Glenn pool is regarded as a promising field, and while the wells do not shew the initial capacity of those in the original Glenn pool, it is believed that they will shew better sustaining powers.

Refined and Products.—The local market for refined has been subjected to the usual conditions incident to the close of the year, and presents little of particular interest for the interval. Export requirements have been fairly well satisfied, our record of clearances shewing a total of 9,087,600 gallons, of which 5,952,000 gallons were carried in bulk. The foreign movement for the previous week involved 8,235,540 gallons. Government statistics indicate an aggregate at 73,631,816 gallons of refined exported during November, against 77,535,651 gallons for the same month in 1907. Totals for eleven months ending November, for the last three years follow :—

	Gallons.	Values.
1906	807,614,500	$50,557,435
1907	829,191,476	54,543,273
1908	1,039,720,277	70,301,309

CLOSING QUOTATIONS.

Crude at the Wells.

The quotations for oil represented by credit balances were :—

	Week ended Jan. 2. 1908.	Jan. 2. 1909.
Pennsylvania	$1·78	$1·78
Tiona	1·78	1·78
North Lima	0·94	1·94
South Lima	0·89	0·99
Indiana	0·89	0·99
Illinois, heavy, below 30 deg.	0·60	0·60
Kansas and Indian Ter., 32 deg. and above	0·41	0·41
Heavy	0·28	0·28
Humble, Tex.	0·75	0·53
Saratoga	0·73	0·53
Sour Lake, Tex.	0·77	0·53
Jennings, La.	0·72	0·55
Canadian Oil :—		
Petrolia	1·34	1·44
Oil Springs, less pipeage	1·41	1·51

Refined—For Export.

In cents.		Week ended Jan. 2. S.W. 110 test.	W.W. 150 test.
Barrels, cargo	per gal.	8·50	@10·00
Philadelphia		8·45	@ 9·95
Bulk, New York		5·00	@ 6·50
Bulk, Philadelphia		4·95	@ 6·45
Cases, New York		10·90	@12·40
Cases Philadelphia		10·85	@12·35

Refined in Cases—110 Fire Test.

	Week ended Dec. 26. 1908.	Jan. 2. 1909.
3,000 to 10,000	11·05	11·05
1,000 to 3,000	11·10	11·10

Refined—Jobbing Lots.

In barrels, pkgs. included.

		Week ended Dec. 26.	Jan. 2.
120 fire test, S.W.	in barrels	12	12
130 fire test, S.W.		12½	12½
150 fire test, W.W.		13½	13½
In bulk from tanks		10	10
300 fire test		13¼@14	13¼@14

Naphtha and Gasolene.

	Week ended Dec. 26.	Jan. 2.
Naphtha, V. M. and P. deod.	14·00	13·00
Gasolene, 86 deg.	24·00	23·00

Pennsylvanian Oil Runs from Dec. 24th to Dec. 29th were :—Dec. 24th, 63,058 ; Dec. 25th and 26th, 418,336* ; Dec. 27th, 104,877* ; Dec. 28th, 223,900 ; and Dec. 29th, 133,214.

* Includes Illinois Oil.

The Deliveries of Pennsylvanian Oil from Dec. 25th to Dec. 30th were :—Dec. 25th, 385,500* ; Dec. 26th and 27th, 376,597* ; Dec. 28th, 183,235* ; Dec. 29th, 215,877* ; Dec 30th, 192,488*.

* Includes Illinois Oil.

Clearances for the Week.

During the week ended Dec. 31st and since Jan. 1, the clearances of petroleum, in gallons, from the port of New York, were as follows :—

	Week.	Year.	1907.
Refined	9,087,600	601,240,918	539,428,575
Crude	—	39,757,420	1,984,959
Naphtha	147,640	14,620,230	11,259,620
Residuum	—	9,425,095	2,740,857

Export Statistics.

The total exports from the port of New York and from the United States have been :—

	Gallons.
From New York, week ended Dec. 31st	12,166,800
Total from New York, from Jan. 1st, 1908	867,213,327
Same period last year	710,812,027
Increase	156,401,300
From United States, week ended Dec. 31st	18,013,456
Total from United States, since Jan. 1st, 1908	1,550,368,122
Same period last year	1,295,847,799
Increase	254,520,323

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The "Review" Shipping List.

JANUARY 15, 1909

(*The following abbreviations are used in this table:*—L. Left; P. Passed; Arr. Arrived; Sp. Spoken; Tr. Trading.)

Vessel.	From.	For.	Latest Date and Position.
ALCHYMIST	Selzaete	Lisbon	Arr. Jan. 4
ALICE ET ISABELLE (Fr. bq.)	New York	Rouen	Arr. Dec. 16
AMERICAN	New York	Puerto Mexico	P. Jupiter, Dec. 26
APPALACHEE	Barrow	New York	Arr. Jan. 6
APSCHERON	Manchester	Batoum	P. Eastham, Dec. 29
ARAL	Tyne	Philadelphia	Arr. Jan. 7
ARAS	Belfast	Penarth	L. Jan. 12
ASHTABULA	San Francisco	—	L. Jan. 13
ASTRAKHAN	Tyne	Philadelphia	P. Nantucket, Jan. 12
AUGUSTA	London	Puerto Mexico	Arr. Dec. 11
AUGUST KORFF	Philadelphia	Liverpool	Off Pt. Lynas, Jan. 14
AUREOLE	Ymuiden	Galveston	Arr. Jan. 7
BAKU STANDARD	Batoum	London	P. Gibraltar, Jan. 7–8
BALAKANI	Batoum	Hamburg	L. Jan. 12
BATOUM	Aroe Bay	Singapore	Arr. Dec. 19
BAYONNE	Venice	Messina	L. Jan. 8
BEACON LIGHT	Newport	Kustendje	L. Jan. 1
BLOOMFIELD	Galveston	Port Arthur	L. Jan. 7
BORJOM	Batoum	Alexandria	Arr. Jan. 2
BRILLIANT	Gothenburg	Philadelphia	P. Dunnet Head, Jan. 13
BROADMAYNE	Tyne	Kustendje	Arr. Jan. 12
BULLMOUTH	Batoum	Colombo	S. Suez, Jan. 9
BULYSSES	Taketoyo	Singapore	Arr. Dec 26
BURGERMEISTER PETERSEN	New York	Swinemunde	L. Jan. 5
BUYO MARU	Sabine Pass	Yokohama (via Suez)	S. Port Tewfik, Dec. 28
CALCUTTA (Br. bq.)	San Francisco	Tsingtan	L. Nov. 11
CAPTAIN A. F. LUCAS (with S.O. Barge 95)	Hamburg	New York	P. Scilly, Jan. 11
CARDIUM	Hamburg	Batoum	S. Portland Jan. 7
CARPATHIAN	Hamburg	Port Arthur (Texas)	L. Jan. 13
CAUCASIAN	Philadelphia	London	Arr. Beckton, Jan. 2
CHARLOIS	Tyne	Philadelphia	P. Dunnet Head, Jan. 6
CHESAPEAKE	Messina	Kustendje	P. Constant'ple, Jan. 4
CHESTER	Antwerp	Philadelphia	Arr. Jan. 8
CITY OF EVERETT (with S.O. Barge 94)	Philadelphia	New York	L. Dec. 29
CIUDAD DE REUS	Sulina	Rouen	P. Sagres, Jan. 7
CLAM	Aroe Bay	Balekpappan	L. Jan. 8
CLEMATIS	Rotterdam	Tyne	Arr. Jan. 10
COALTAR (s.)	Newport	Port Talbot	Arr. Dec. 12, in Port, Jan. 12
COL. E. L. DRAKE	—	—	Coasting U.S. and Pacific
COWRIE	Cochin	Aroe Bay	L. prev. Jan. 14
CUYAHOGA	San Francisco	Moji	At Yokohama, Prev. Jan. 14
CYMBELINE	Philadelphia	Bordeaux	L. Jan. 7
CZAR NICOLAI II.	Hamburg	Batoum	S. Constant'ple, Jan. 8
DAGHESTAN	Batoum	Hamburg	L. Jan. 12
DAKOTAH	San Francisco & Hong Kong	Manila	S. Hong Kong, Dec. 31
DELAWARE	Manchester	Philadelphia	Arr. Jan. 7
DERBENT	Antwerp	Batoum	Arr. Jan. 9
DEUTSCHLAND	New York	Cette	Arr. Jan. 4
DIAMANT	New York	Swinemunde	P. Butt of Lewis, Jan. 13
EDWARD DAWSON	Hull	New Orleans	L. Dec. 29
ELAX	Freshwater	Yokohama	L. Dec. 31
EL LOBO	Tyne	Port Arthur (Texas)	Arr. Jan. 3
ENERGIE	New York	Danzig	P. Scaw, Jan. 11
ERIVAN	Batoum	Dunkirk	P. Constant'ple, Jan. 10
ETELKA	Cette	Marseilles	Arr. Jan. 12
EUPLECTELA	Rotterdam	Tyne	Arr. Dec. 28, in Port, Jan. 9
EXCELSIOR	Hamburg	New York	S. Tyne, Jan. 12
FRANCE MARIE (French bq.)	Philadelphia	Cette	P. Del. Break, Jan. 3
GEESTEMUNDE	New York	Aarhuus	P. Dunnet Head, Jan. 12
GENESSE	Sunderland	New Orleans	P. Dover, Jan 13
GEORGIAN PRINCE	Novorossisk	Bordeaux	P. Constant'ple, Jan. 9
GOLDMOUTH	Singapore	Europe (via Cape)	P. Cape Agulhas, Dec. 28
GUTHEIL	Pillau	Philadelphia	P. Dunnet Head, Jan. 6
HAINAUT (Du. sh.)	Antwerp	New York	Off the Wight, Dec. 19
HARRY WADSWORTH	Hull	New Orleans	Arr. Jan. 8
HELIOS	Port Talbot	New York	L. Jan. 5
HERMIONE	Kustendje	Hamburg	L. Jan. 12
HESPERUS	Hamburg	New York	P. Dunnet Head, Jan. 4
HESPERUS	Honfleur	Tyne	Arr. Nov. 25
HOTHAM NEWTON	Zeebrugge	Kustendje	Off the Wight, Jan. 13
HYRCANIA	Batoum	London	P. Gibraltar, Jan. 12
IOANNIS COUTZIS	Antwerp	Batoum	S. Algiers, Jan 1
IROQUOIS (towing barge Navahoe)	London	New York	P. Nantucket, Jan. 13
J. B. AUG. KESSLER	Singapore & Port Natal	Europe	S. Port Natal, Jan. 6
JAMES BRAND	Emden	Galveston	At New Orleans, Jan. 5
JOYO MARU	London	Cardiff	Arr. Nov. 22, in Port, Jan. 12
JULES HENRI (French bq.)	Marseilles	Philadelphia	P. Tarifa, Jan. 1
KURA	Foynes	Newport	Arr. Jan. 10, in Port. Jan. 12
LA CAMPINE	Antwerp	New York	Arr. Jan. 2
LA FLANDRE	Ghent	Philadelphia	At Sunderland, Jan. 12
LA HESBAYE	Antwerp	Philadelphia	Arr. Jan. 10
LACKAWANNA	New York	Savona	S. Algiers, Jan. 9
LANSING	San Francisco	Ancon	S. Panama, Jan. 4
LE COQ	Rouen	New York	Arr. Jan. 11
LOUTSCH	Batoum	Odessa	L. Dec. 29
LUCERNA	Novorossisk	London	P. Constant'ple, Jan. 10
LUCILINE	Batoum	Rouen	Arr. Havre Rds., Jan. 12
LUMEN	Ghent	Tyne	Arr. Jan. 5, in Port, Jan. 9
LUTETIAN	Rouen	Philadelphia	Arr. Jan. 13
LUX	Philadelphia	Alicante	P. Del. Break., Dec. 27
MAKKAVEI	Kustendje	Alexandria	S. Constant'ple, Jan. 5
MANHATTAN	Batoum	—	P. Gibraltar, Jan. 1
MANNHEIM	Philadelphia	Hamburg	In Port, Jan. 10
MARGARETHA	Genoa	Catania	L. Dec. 31
METEOR	Odessa	Vladivostock	At Manila, Dec. 1
MEXICAN PRINCE	Philadelphia	Stettin	Arr. Jan. 12
MIRA	Calais	Blyth	Arr. Dec. 19, in Port, Jan. 12
MUREX	La Plata	Coronel	L. Dec. 28
NARRAGANSETT	London	New York	In Wireless Com., Browhead, Jan. 8
NEWYORK	New York	Rotterdam	P. Dover, Jan. 14
NIAGARA	San Francisco	Chingkiang	Arr. Jan. 4
OBERON	Rangoon	U.K.	P. Sagres, Jan. 10
OCEAN	Tyne	Batoum	P. Gibraltar, Jan. 11–12

Vessel.	From.	For.	Latest Date and Position.
OILFIELD	New York & Bordeaux	Tyne	Arr. Dec. 10, in Port, Jan. 6
OKLAHOMA	Port Arthur (Texas)	New York	L. Dec. 24
ORIFLAMME	New York	Cette	L Jan. 3
OTTAWA	Manchester	Philadelphia	P.O.Hd. Kinsale, Jan. 7
OURAL	St. Louis (Rhone)	Batoum	P. Constant'ple, Jan. 10
PAUL PAIX	Hartlepool	Batoum	P. Sagres, Jan. 11
PAULA	New York	Hamburg	Arr. Jan. 12
PECTAN	Avonmouth	Liverpool	Arr. Jan. 1, in Port, Jan. 13
PENNOIL	Philadelphia	Hamburg	At Rotterdam, Jan. 12
PETROLEINE	Tyne	Philadelphia	Arr. Jan. 2
PHOEBUS	Hamburg & Tyne	New York	P. Dunnet Head, Jan. 8
PINNA	Honololu	Yokohama	Arr. Jan. 2
POTOMAC	New York	Birkenhead	L. Jan. 5
PROGRESSO ARGENTINA (Ar. bq.)	Buenos Ayres	Port Arthur (Texas)	Arr. Jan. 12
PROMETHEUS	New York	Rotterdam	Arr. Jan. 4, sailed Jan. 8, Hamburg
PRUDENTIA	Hull	New York	P. Beachy Head, Jan. 12
PURELIGHT	Tyne	Philadelphia	L. Jan. 12
QUEVILLY (Fr. bq.)	New York	Rouen	L. Jan 12
RENDOVA (Br. bq.)	Seville	Philadelphia	Arr. Jan. 13
RION	Tyne	Philadelphia	L. Jan. 13
ROCK LIGHT	Pera	London	L. Jan. 12
ROMANY	—	Samboe	Arr. Jan. 8
ROTTERDAM	New York	Amsterdam	Arr. Jan 12
ROUMANIAN	Tyne	Port Arthur (Texas)	Arr. Jan. 11
RUSSIAN PRINCE	Tyne	Cienfuegos	Arr. Jan. 9
SALAHADJI	Balekpappan	Pladjoe	L. Jan. 6
SAN CRISTOBAL	London & Grimsby	Puerto Mexico	P. Sand Key, Jan. 12
SAN IGNACIO DE LOYOLA (Sp. bq.)	Pasages	Philadelphia	L. Dec. 31
SANTA MARIA	San Francisco	Taltal	At Tocopilla, Dec. 17
SANTA RITA	San Francisco	Guatemala	L. Jan. 1
SARANAC	Calcutta & Singapore	—	At Suez, Jan. 9 10
SAXOLEINE	Tyne	Philadelphia	Arr. Jan. 5
SCHUYLKILL	New York	Batavia	S. Port Natal, Dec. 26
SEMINOLE	San Domingo	New York	1,025 miles S. of Sandy Hk., Jan. 1
SERVIAN	Sunderland	Port Arthur (Texas)	P. Sand Key, Jan. 12
SNOWFLAKE	Philadelphia	Bergen	P. Del. Break., Jan. 1
SOYO MARU	Port Arthur (Texas)	Yokohama	Cld. Singapore, Dec. 1
SPONDILUS	Philadelphia	Calcutta	S. Aden, Jan. 2
STANDARD	New York	Hamburg	Off the Wight, Jan. 12
STROMBUS	Rotterdam	Batoum	Arr. Jan. 11
SULTAN VAN LANGKAT	Madras	Aroe Bay	L. Jan. 3
SUN	Philadelphia	Sabine Pass	Arr. Jan. 1
SUNLIGHT (Br. bq.)	Dunkirk	Port Talbot	L. Dec. 29
SURAM	Port Arthur	Newport Nws	L. Jan. 6
SUWANEE	Sunderland	Tyne	Arr. Jan. 10
SVIET	Batoum	Alexandria	S. Constant'ple, Jan. 8
TAMARC	Barrow	Philadelphia	Arr. Jan 7
TELENA	Sabang	Las Palmas	S. Port Natal, Jan. 1
TEREK	Philadelphia	Manchester	P. Queenstown, Jan. 13
TEXAS	Avonmouth	Port Arthur	L. Jan. 5
TIFLIS	Tyne	Batoum	L. Jan. 4
TIOGA	Philadelphia & London	Liverpool	Arr. Jan. 11
TONAWANDA	Haiphong	Hong Kong	Arr. Dec. 8
TROCAS	Singapore	Calcutta	L. Jan. 10
TUSCARORA	Hong Kong	San Francisco	Arr. Dec. 21, in Port, Dec. 31
VEDRA	Palembang	Hiogo	Arr prev. Jan. 7
VILLE DE DIEPPE (Nor. bq.)	Rouen	Philadelphia	Arr. Jan 10
VOLUTE	Calcutta	Singapore	Arr. Jan. 7
WASHINGTON	Bengkalis	Hamburg	Arr. Jan. 12
WASHTENAW	San Francisco	Astoria	Arr. Dec 19
WEEHAWKEN	Kustendje	Thameshaven	Arr. Jan. 13
WILLKOMMEN	Tyne	Philadelphia	P Dunnet Head, Jan. 6
WINNEBAGO	San Francisco	Coo Bay	L Dec. 8

Latest Market Intelligence.

LONDON OIL MARKET.

Supplied by Messrs. Benjamin & Gee, 31, St. Mary Axe, E.C.

Jan. 15th, 1909.

There are no alterations to report in the prices of Refined Petroleum, which remain as follows:—Russian 6½d. to 6¾d.; American, 7d. to 7¼d.; Water White, 8d. to 8¼d.; Roumanian, 7d.

LUBRICATING OILS

There is a further drop of 2s. 6d. per ton to report on No. 1 Russian. The latest quotations are:—

American pale, £6 10s. to £10 10s.
American dark cylinder, from £8.
American filtered cylinder, from £11 5s.
No. 1 Russian, for Spot, £8 7s. 6d.

TURPENTINE.

American Turpentine has been fairly firm during the week, although at the moment it is again dull. The following are the latest quotations:—Spot, 29s. 9d.; February to April, 30s.; May to August, 31s.; July to December, 32s.

LIVERPOOL OIL MARKET.

Jan. 15th.

Refined oils are quiet, and sellers quote 6¾d., for Russian, Galician or Roumanian; and 7¼d. to 8¼d. per gallon for American.

Petroleum Spirit continues at 1s. 0d. to 1s. 1½d. per gallon for American deodorised, according to quality on the spot.

LATEST AMERICAN PRICES.

New York, Jan. 14th.

Refined, in cases, is steady at 10·90; Standard White, 8·50; Credit balances, 1·78c.

Philadelphia, Jan. 14th.

Standard White is now quoted at 8·45.

RUSSIA.

Baku, Jan. 11th.

The Baku oil market is firm. Crude oil, spot, 19 copecs per pood. Residuals, 19⅜ copecs. Kerosene, in waggons, 25¼ copecs.

BELGIUM.

Antwerp, Jan. 11th.

The petroleum market is firm. Price of Standard White, spot, 22 francs per 100 kilos; February, 22¼.

FRANCE.

Paris, Jan. 7th.

Illuminating oil is quoted in bulk, in whole tank waggons, 25·75 francs per hectolitre; spirit, 34·50 francs per hectolitre. Special white oil, in barrels or cans, 33·75 francs per hectolitre.

GERMANY.

Hamburg, Jan. 11th.

The kerosene market is firm. The price of American Standard White is 7.70 marks per 50 kilos.; Galician, 7.35 marks.

HOLLAND.

Amsterdam, Jan. 11th.

The petroleum market remains firm. American Standard White, spot, 12·20 florins per 100 kilos.

ROUMANIA.

Jan. 11th.

	Francs.
Crude oil from different fields, including pipe line charges, per 100 kgs.	4·50–4·70
Refined oil, exclusive of taxes, ex. refinery	8·70
Benzine, 717–720, including taxes	20·00
Benzine, 750–760	15·00–15·50
Residuals in tank waggons, at refinery	4·30–4·35
Paraffin	120·00

Prices for Export.

Refined oil, f.o.b., per 100 kgs.	7·50–8·00
Benzine, sp. gr. 0·710–0·715, f.o.b.	17·00–18·00
,, sp. gr. 0·715–0·720 ,,	15·00–16·00
,, sp. gr. 0·730–0·740 ,,	10·00–11·00
,, sp. gr. 0·745–0.755 ,,	9·00–10·00

INDIA.

Bombay, Dec. 26th.

The market is strong, and prices slightly advanced.

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IMPORTS of PETROLEUM into UNITED KINGDOM

Specially prepared for this Journal by the Custom House.

FOR THE WEEK ENDED 4TH JANUARY, 1909—

Date.	Port and Importers.	Description.	No. of Gals.	Port Whence.
Dec.	LONDON—			
29	Anglo-American Oil Co.	Lub.	35,000	New York
29	,, (Genesee)	Gas	926,990	Philadel.
29	Produce Brokers' Co.	L. Resid.	6,000	Trieste
29	H. Finckler and Co.	,,	5,970	Fiume
29	,,	,,	3 980	,,
24/11	(By query) ,,	Resid.	2,240	,,
30/11	,, ,,	,,	8,000	,,
4/11	,, ,,	,,	39,300	,,
29	E. Clark	,,	1,100	Philadel.
30	British and Foreign Wharf	Lub.	400	Antwerp
30	Schlieman's Oil Co.	,,	2,600	Baltimore
30	Mordaunt Bros	,,	5,000	New York
30	Fielder, Hickman and Co.	,,	2,600	,,
30	British Pet. Co. (Caucasian)	Gas	1,599,000	Philadel.
30	London & India Docks Co.	Lub.	400	New York
31	,,	Lub. Oil and Gr.	720	,,
31	Mercantile Lighterage Co.	Lub.	37,900	,,
31	Anglo-American Oil Co. (Narragansett)	Lamp	2,533,990	,,
31	,, ,,	Lub.	423,210	,,
31	Lubricating & Fuel Oils, Ld.	,,	10,250	Philadel.
31	,, ,,	,,	4,920	,,
31	T. H. Lee	Lub. Oil and Gr.	1,300	Hamburg
31	G. Haller and Co.	,,	320	Antwerp
31	Page, Son and East	,,	160	,,
Jan.				
1	G and H. Green	Lub.	3,330	New York
2	London and India Docks Co.	,,	480	,,
2	Mordaunt Bros.	,,	5,000	,,
2	Squire and Calver	,,	2,000	Philadel.
4	Anglo-Amer. Oil Co. (Tioga)	Gas	697,430	,,
4	Mordaunt Bros.	Lub.	21,450	New York
4	Wilkins, Campbell and Co.	Lub. Gr.	3,000	Philadel.
4	A. Brown and Co.	Lub.	3,200	,,
4	,,	Lamp	4,000	,,
4	,,	Lub.	2,400	,,
4	Trinidad Lake Asp. Pav. Co.	,,	2,400	,,
4	Scott's Wharf	,,	2,000	New York
4	Livett Frank and Son	,,	2,740	,,
4	Argo Steamship Co.	,,	300	Bremen
4	T. H. Lee	Lub. Oil and Gr.	340	Hamburg
4	London and India Docks Co.	Lub.	3,360	,,
Dec.	LIVERPOOL—			
29	Meade-King, Robinson & Co.	Lub. Gr.	5,200	Baltimore
29	Vacuum Oil Co.	Lub.	9,120	New York
29	G. B. Taylor	,,	19,200	,,
29	Anglo-Amer. Oil Co. (Ottawa)	Gas	485,730	Philadel.
29	Bramwell, Fern and Co.	L. Comp.	970	Baltimore
30	Crew, Levick and Co.	Lub.	1,270	Philadel.
30	G. B. Taylor	,,	720	New York
30	Meade-King, Robinson & Co.	,,	3,000	,,
Dec.				
30	W. W. Jones, Dooly and Co.	Lub.	150	New York
30	Vacuum Oil Co,	,,	2,920	,,
31	Ismay, Imrie and Co.	,,	240	,,
Jan.				
2	G. B. Taylor	,,	6,400	,,
2	D. Owen and Son	,,	2,260	Pt. Arthur
2	Meade-King, Robinson & Co.	,,	13,960	Baltimore
2	A. Hopps and Sons	M. Colza	2,790	,,
4	C. C. Wakefield	Lub. Gr.	260	Antwerp
4	Meade-King, Robinson & Co. (Pectan)	Crude	942,480	Pt. Arthur
Dec.	BRISTOL—			
30	Anglo-Bosphorus Oil Co.	Lub.	3,600	New York
30	J. and R. Bush	,,	21,400	,,
Jan.				
1	Pickford's, Ltd.	Lub. Oil and Paste	630	Hamburg
1	H. Pritchard and Co.	Lub.	3,900	New York
2	H. R. James and Son	,,	10,400	,,
2	Anglo-Amer. Oil Co. (Texas)	Lamp	1,768,160	Sabine
	CARDIFF—			
4	Bristol Steam Nav. Co.	L. Paste	570	Hamburg
Dec.	GRIMSBY—			
29	J. Sutcliffe and Son	Lub.	170	Antwerp
29	,,	,,	480	,,
Jan.				
1	,,	,,	160	,,
Dec.	HULL—			
30	Wilsons and N E. Co.	,,	480	Hamburg
30	,,	Tar Oil	4,240	,,
31	,,	Lub.	480	Antwerp
	MANCHESTER—			
29	Bramwell, Fern and Co.	,,	8,280	Philadel
29	,,	,,	7,270	,,
29	,,	Lamp	150	,,
29	Crew, Levick and Co.	,,	22,480	,,
29	W. W. Jones, Dooly and Co.	Lub.	2,500	,,
29	Geo. B. Taylor	,,	654,000	,,
30	W. Hodgson and Co.	,,	2,400	,,
30	J. T. Fletcher and Co.	,,	580	Antwerp
31	Manchester Liners, Ltd.	,,	17,080	Philadel.
31	Kimberley Oil Co.	M. Colza	1,650	New York
31	Liverpool Storage Co.	Lub.	14,280	,,
31	George B. Taylor	,,	100,680	,,
31	Bramwell, Fern and Co.	,,	400	,,
31	Anglo-American Oil Co. (Ottawa)	Gas	485,730	Philadel.
31	W. Hodgson and Co.	Lub. Gr.	40	Antwerp
31	C. H. Morton and Sons	Lub	2,880	Philadel.
31	Diamond Lubricating Co.	,,	3,220	,,
	SOUTHAMPTON—			
29	P. E. Curry	,,	10,600	New York
	SWANSEA—			
29	Richards, Turpin and Co.	,,	2,400	,,
Jan.	SOUTH SHIELDS—			
4	Anglo-American Oil Co.	,,	42,400	Philadel.

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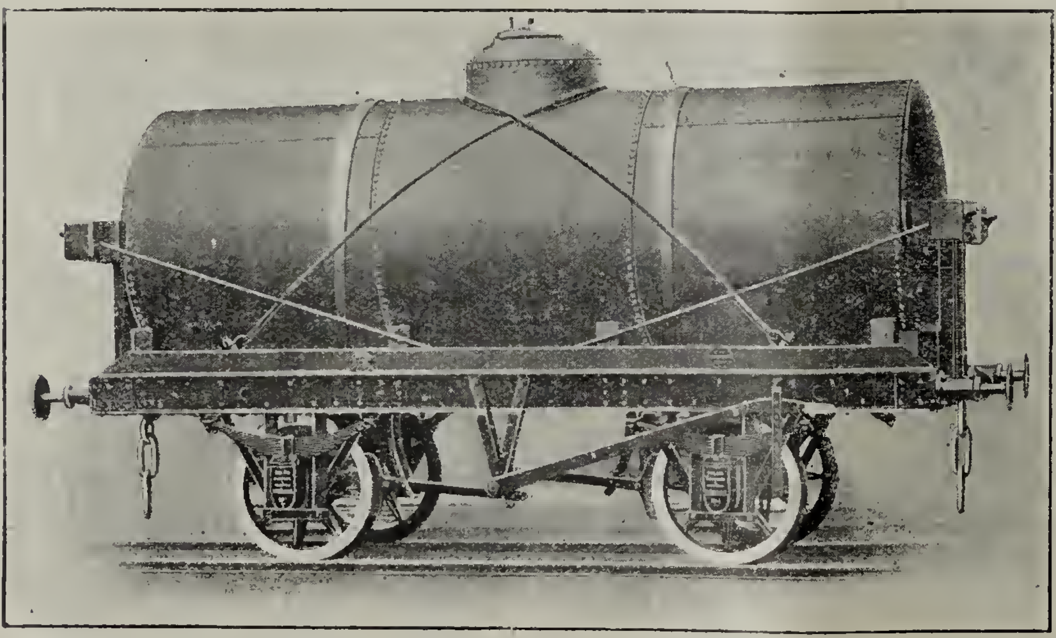

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No corrosive fumes given off. Prevents rust at the joints and consequent leakage. Stronger work. Less solder required.

IMPORTS.—(*Concluded*).

Date.	Port and Importer.	Description.	No. of Galls.	Port Whence.
Jan.	Aberdeen—			
2	R: C. Reid and Co... ..	Lamp	2,000	Hamburg
Dec.	Dundee—			
30	D. Alexander and Sons ..	,,	800	,,
30	,, ...	Lub.	130	,,
30	A. B. Fleming and Co. ..	,,	2,420	Riga
	Glasgow—			
31	Donaldson Bros.	,,	2,600	Baltimore
31	Anchor Line	,,	17,320	New York
	Leith—			
31	Geo. Gibson and Co. ..	,,	6,000	Antwerp
Jan.				
2	Henderson and McIntosh ..	,,	5,600	Philadel.
4	J. Currie and Co.	,,	360	Bremen
4	,, ...	,,	840	Hamburg
Dec.	Belfast—			
31	G. Heyn and Sons	Lamp	21,000	N. Orleans
Jan.				
2	British Pet. Co. (Aras) ..	,,	497,000	Baltimore
2	,, ,,	Gas	721,000	,,
Dec.	Limerick—			
31	British Pet. Co. (Kura) ..	Lamp	886,000	New York
Jan.	Dublin—			
4	Palgrave, Murphy and Co.	,,	2,100	N. Orleans
	Deduct to Correct—		13,260,260	
	Grangemouth—			
1/12	Anglo-American Oil Co. (Aug. Korff)	Lub.	6,790	Philadel.
	Total for Week		13,253,470	

Notes:—(By query)—

Liverpool—

18/12 Meade-King, Robinson & Co. (Neerlandia) Borneo Dis. 14,740 Antwerp

Should be— ,, Gas 147,370 ,,

18/12 London—Entry passed by Petroles de Grosnyi for Petroleum Spirit, has been amended to Crude.

FOR THE WEEK ENDED 11TH JANUARY, 1909—

Date.	Port and Importers.	Description.	No. of Galls.	Port Whence.
Jan.	London—			
5	Langley, Smith and Co. ..	Lub.	4,800	New York
5	Fielder, Hickman and Co...	,,	5,200	,,
5	,, ..	Lub. Gr.	2,600	,,
5	Page, Son and East.. ..	,,	40	Antwerp
5	Produce Brokers' Co. ..	Lub.	7,800	Philadel.
5	,, ..	,,	7,200	New York
5	Lubricating & Fuel Oils, Ld.	,,	2,460	Philadel.
6	London and India Docks Co.	Lub. Oil and Gr.	320	New York
6	Lub. and Fuel Oils Co. ..	Lub.	10,740	Philadel.
6	Mordaunt Bros.	Lamp	10,000	Hamburg
6	Mercantile Lighterage Co.	Lub.	5,250	New York
6	Anglo-American Oil Co.	,,	102,280	Philadel.
6	Ocean Oil Co.	,,	4,000	,,
7	E. J. Walkenshaw	,,	8,000	,,
7	Anglo-American Oil Co. ..	,,	43,880	New York
7	London and India Docks Co.	,,	1,000	Philadel.
7	Mercantile Lighterage Co...	,,	2,280	,,
8	Bowring Petroleum Co. ..	,,	4,140	,,
8	E. J. Walkinshaw	,,	4,000	,,
8	A. Duckham and Co. ..	,,	6,830	,,
8	London and India Dock Co.	Lub. Gr.	130	Antwerp
8	Page, Son and East ..	Lub. Oil and Gr.	200	,,
11	T. H. Lee	Lub. Gr.	90	Hamburg
11	,, ...	,,	200	,,
11	Anglo-American Oil Co. (Weehawken)	Lamp	139,750	Kustendje
11	,, ,,	Naph.	155,300	,,
11	,, ,,	Benzine	783,060	,,
11	Fuerst Bros.	Lub.	400	Riga
11	Mordaunt Bros.	Lamp	2,100	New York
11	,, ...	Lub.	2,500	,,
11	London and India Dock ..	,,	4,000	,,
	Liverpool—			
5	D. Owen and Son	,,	1,070	,,
5	Bramwell, Fern and Co. ..	,,	1,720	Baltimore
5	Burnaby and Chantrell ..	Lub.Gr.	1,570	New York
5	Stockdale and Doel	Lub.	4,480	Boston
5	Vacuum Oil Co.	,,	5,080	New York
6	E. H. Kellogg and Co. ..	,,	1,000	,,
6	Jas. Light and Sons ..	,,	2,000	,,
6	Meade-King, Robinson & Co.	,,	6,160	Baltimore
7	A. Hopps and Sons.. ..	,,	4,800	N. Orleans
7/12	Liverpool Warehousing Co.	,,	2,720	St. Petersbrg
11	Pickfords	Lub. Oil and Paste	310	Hamburg
11	W. Gibson and Sons ..	Lamp	2,050	Boston
Jan	Bristol—			
5	J. and R. Bush	Lamp	4,000	New York
5	,, ...	Lub.	11,800	,,
6	First Anglo-Russian Oil Co.	,,	120	Hamburg
7	Pickford's	,,	210	,,
11	H. R. James and Sons ..	,,	18,600	New York
	Cardiff—			
11	Homelight Oil Co. (Baku Standard)	Lamp	1,136,430	Batoum
	Dover—			
7	S.Eastern and Chatham Ry.	Lub.	80	Calais
	Grimsby—			
7	J. Sutcliffe and Son ..	,,	80	Hamburg
7	,, ...	,,	370	Antwerp
8	,, ...	,,	240	,,
	Harwich—			
5	D. Howard	,,	90	,,
5	,, ..	,,	290	,,
	Hull—			
6	Hull & Netherlands S.S. Co.	Tar Oil	3,900	Rotterdam
7	G. Hardy and Co.	Lub.	260	Antwerp
7	W. Gilyott and Co... ..	,,	73,520	New York
7	T. Wilson, Sons and Co. ..	Spirit	120	Odessa
7	Wilsons and N.E. Co. ..	Lub.	2,870	Hamburg
11	,, ...	,,	2,880	Antwerp
	Manchester—			
5	Lamport and Holt	,,	1,200	New York
6	Schofield and Co.	,,	410	,,
6	J. T. Fletcher and Co. ..	,,	40	Antwerp
7	Meade-King, Robinson & Co.	M. Colza	2,000	New York
7	Bramwell, Fern and Co. ..	Lub.	420	,,
7	G. B. Taylor..	,,	65,840	,,
9	W. Hodgson and Co. ..	,,	1,020	,,
11	Liverpool Storage Co. ..	,,	8,600	,,
	Newcastle—			
5	Tyne-Tees S.S. Co... ..	,,	2,800	Antwerp
	Newport—			
7	Jones, Heard and Co. ..	,,	5,960	New York
	South Shields—			
8	Meade-King, Robinson & Co.	Lamp	4,000	Philadel.
8	Ragosine and Co.	Lub.	1,200	,,
5	Meade-King, Robinson & Co.	,,	29,200	,,
5	,, ..	Lamp	5,000	,,
	Swansea—			
9	Richards, Turpin, and Co. ..	Lub.	2,400	New York
	Dundee—			
8	D. Alexander and Sons ..	Lamp	240	Hamburg
	Glasgow—			
5	Clyde Shipping Co... ..	Lub.	320	Antwerp
7	J. and A. Allan	,,	61,800	Philadel.
7	,, ..	Resid.	4,400	,,
7	Burrell and Son	,,	4,000	Trieste
	Grangemouth—			
6	W. Graham-Yooll and Co...	Lamp	5,000	Hamburg
6	,, ...	,,	4,000	,,
6	,, ...	,,	6,000	,,
6	J. Currie and Co.	Lub.	40	,,
6	,, ...	,,	240	,,
6	,, ...	L. Paste	200	,,
6	,, ..	Lub.	3,600	,,
6	,, ...	,,	4,920	,,
	Leith—			
6	G. Gibson and Co.	,,	400	Antwerp
7	,, ...	,,	240	,,
7	J. Currie and Co.	,,	680	Bremen
11	,, ...	,,	480	Hamburg
11	W. Graham-Yooll and Co..	Lamp	3,400	,,
	Belfast—			
5	J. C. Pinkerton and Co. ..	Lub.	60	,,
	Total for the Week ..		2,839,480	
	Total for the Fortnight ..		16,092,950	

BORE HOLES FOR OIL
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JOHN M. THOM,
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The Petroleum Review.

By PAUL DVORKOVITZ.

Vol. XX. *(New Series.)* JANUARY 30TH, 1909. No. 443

THE PETROLEUM REVIEW:

The ANNUAL SUBSCRIPTION for both English and Foreign readers is 26s., including Postage. Single Copies may be had at the offices at 1s.

The Editor would esteem it a favour if readers, when communicating with the various firms advertising in our pages, would mention the "Review."

Contributions upon items of interest are always welcomed from subscribers, but in each case these should be accompanied with the name and address of the sender, not necessarily for publication.

Editorial Notes.

America during 1908. The two-page review of the operations in the American oil fields during the past year which we publish in this issue deserves more than passing notice, for inasmuch as the American fields supply almost two-thirds of the total crude oil production of the world, the progress which that country is consistently making, becomes a matter of direct interest to every student of the petroleum industry. It is just fifty years ago since Colonel E. L. Drake discovered the first oil well in America, and the position of the American oil industry to-day is overwhelming evidence of the enormous progress which has been accomplished during the intervening fifty years. And still the march continues. With increased output, American oil finds wider markets further afield, and it is a matter of common knowledge that the march of progress is far from having completed its run. A few years ago, one would have been laughed at had it been suggested that the wells in the Californian fields, some of them hundreds of miles from the seaboard, would one day produce the crude oil necessary to keep the large refineries of Japan supplied; yet such is the case to-day, and each passing year sees a further extended outlet in this direction. There is no parallel in history of the progress made by the American oil industry.

Fighting Against Great Odds. Mr. Arthur Kitson, the inventor of the well-known oil lamp which bears his name, had much to say last week on the occasion of the firm's annual staff dinner, of the uphill fight he has been and is still waging on behalf of oil as an illuminant. We have followed the vicissitudes of Mr. Kitson's companies, and have admired the pluck and grim tenacity which have at all times led them to surmount difficulties and go on their way rejoicing, and no one more than ourselves is gratified to learn that at last there is straight sailing ahead to that goal of success which doubtless awaits the Kitson-Empire Lighting Co., Ltd. As Mr. Kitson pointed out, there is even to-day much prejudice against oil light, as well as considerable and strong opposition. Why that should be so we are at a loss to understand, yet we are naturally aware of the existence of it. Our candid opinion, however, is that the oil trade itself is responsible for the major portion of it. From whatever quarter oil is attacked, the members of the trade take no steps to protect their own interest, and it seems to us to be a case of "give a dog a bad name," etc. The sooner the oil trade arouses itself and says, "these things we shall not tolerate," then the sooner will opposition disappear, and with it, also prejudice. We would that there were more of Mr. Kitson's stamp of men in the oil trade.

The Oil War in Scotland. Something resembling an oil war is being waged in Bonny Scotland, and it appears to be spreading to parts of the Kingdom south of the Tweed. How it came about is scarcely general knowledge, and so it may be interesting to recall the fact that until quite recently the Scotch illuminating oil trade has been carried out in barrels, and naturally the wholesale dealer has for years been recognised as an important factor. Latterly, however, one of our large English oil importing firms introduced its up-to-date methods of delivery by road tank cars direct to the retailer in the "land of brown heath and shaggy wood," and this policy, which, by-the-bye, might have been introduced years ago, has aroused the ire of the leading Scottish refiners, some of whom have taken the matter seriously to heart by following the example. But Scottish folk are never happy when playing a defensive game, and possibly on the basis of "One good turn deserves another" we find that one of the Scottish refining firms has now entered the English market, and from several provincial depôts is endeavouring to recover the ground it seems to imagine is being lost in Scotland. We have yet to hear that the advent of Scottish illuminating oil on the English market has created anything like a scare among the old established oil distributing firms, but it does appear that, in the present case, the policy of "to stay at home is best" would have proved the more advantageous in the long run.

Continued Progress in Roumania. Though the figures of production in the oil fields of Roumania during the past twelve months shew no substantial gain in the output, it can be taken for granted that nevertheless, considerable progress was made in the industry in the year 1908, and its importance both at home and in international commerce became greater. It was generally anticipated that the year's record would not shew any great increase in the production of crude oil, and the principal reason for such anticipation was that the money shortage in the country would necessarily restrict great activity in boring operations. Then it was apparent that whatever enterprise would be shewn in the newer and admittedly prolific territories, the actual results were bound not to greatly swell the 1908 figures. The activity, however, which is very unmistakable in the newer localities, is bound to tell most effectively upon the total production for the present year, and, even at this early stage, it is a foregone conclusion that the record—and it certainly was a record—for 1908 will be far exceeded. We hope shortly to dwell at length upon the Roumanian industry during the past twelve months.

◆

THE PRODUCTION OF THE RUSSIAN PETROLEUM AND THE BAKU PETROLEUM COMPANIES.

The total production of the Russian Petroleum and Liquid Fuel Co., Ltd., and the Baku Russian Petroleum Co., Ltd., for 1908, as compared with the two companies' output for the five preceding years, is given in the following table:—

Russian Petroleum and Liquid Fuel Co.

	Poods.		Poods.
1903 ..	.. 27,264,000	1906 ..	.. 10,488,000
1904 ..	.. 28,652,000	1907 ..	.. 10,491,000
1905 ..	.. 13,022,000	1908 ..	.. 11,265,000

The Baku Russian Co.

	Poods.		Poods.
1903 ..	.. 23,436,000	1906 ..	.. 11,526,000
1904 ..	.. 26,027,000	1907 ..	.. 13,204,000
1905 ..	.. 15,264,000	1908 ..	.. 8,476,000

In the face of such figures, we feel that it is quite unnecessary to go into details either of the general policy of management, or the policy carried out in regard to the exploitation of the companies' properties. The figures themselves are eloquent evidence.

◆

LONDON OIL SHARE MARKET.

Friday, January 29th, 1909.

General business on the London Stock Exchange has been dull and quiet and Oil Shares have received, with but few exceptions, little attention since our last issue.

Assam Oil Shares have again proved the feature, dealing being somewhat irregular at times though the tendency is towards a higher range of value. The current price on Saturday, January 16th, was 15s. 9d. to 16s. 3d., and it fluctuated considerably, at one time dipping as low as 14s. 3d. to 15s. 3d. The loss, however, was speedily recovered, and quotations are strong at 16s. to 17s., which registers an advance of 9d. on balance.

Burmah Oil Shares have risen $\frac{1}{16}$ to $4\frac{13}{16}$-$4\frac{15}{16}$, and Shell Transport Preference are $\frac{1}{8}$ better at $10\frac{3}{4}$-11, but the Ordinary Shares in the latter company have shed 3d., Spies are 6d. lower at 9s. 6d. to 10s. and Lobitos Oil have lost 9d. at 24s. to 25s.

Russian Ordinary and Preference are both slightly stronger at 2s. 6d. to 3s., but the Six Per Cent. Debentures are three points lower at 35·40. At the end-January settlement the account in Oil Shares was very small indeed. Comparisons of making-up prices shew only one improvement, viz., that of $1\frac{1}{2}$d. per share in Schibaieff Ordinary at $\frac{1}{32}$. On the other hand, Baku Preference have fallen $1\frac{1}{2}$d. at $1\frac{1}{32}$., Californian Oilfields $\frac{1}{16}$ at $4\frac{15}{16}$, and Shell Transport Ordinary 6d. at 46s. No change took place in either Anglo-Russians at 6d., Baku Ordinary at 3d., Russian Ordinary at $\frac{1}{8}$, Preference 2s. 9d., or Schibaieff Preference at $\frac{1}{4}$.

GOLDING'S POWER COMPUTING DISCS.

We have received from Messrs. Charles Griffin and Co. Ltd., of Exeter Street, Strand W.C., a horse-power computer for steam, gas and oil engines. The computer is a very ingenious form of mechanical calculator for solving the numerous problems associated with power, size and speed of engines of all kinds. The instrument, which is in the form of discs mounted one above the other, is a decidedly simple contrivance. By its use, it is possible in an instant to accurately ascertain the horse-power of any engine, the action of the computer being based upon the well-known principal of logarithmic calculation. There should be a great demand for these computing discs.

◆

FUEL SAVING AT BAKU.

At a meeting of the Baku Section of the Russian Technical Society, held recently, a report submitted by Mr. T. A. Budagiantz respecting the utilisation of exhaust steam by means of turbines of the Rato system. In the opinion of the committee who have investigated the matter the turbine installation used by Messrs. Adamoff at Balakhany yields a saving in fuel of 52 per cent. Mr. Budagiantz's statement that by the system 10·3 kilogrammes of exhaust steam produce 1 effective horse-power has been admitted as correct. On this basis, field installations adopting the Rato turbine will, instead of the usual 25 to 35 kilogrammes of steam per horse-power, consume only 6·5 to 7·5 kilogrammes. In view of the importance of the question and incompleteness of the work of the committee, additional members were appointed, and the committee was asked to continue its investigations and report the results to the general meetings of the section.

◆

THE GERMAN VACUUM OIL CO.

According to *Petroleum* the German Government has intimated to the German Vacuum Oil Co. that it will not permit the carrying out of the proposed enlargement of the company's refinery, situated near Schulan, at the mouth of the Elbe. On the other hand, the fear which was entertained that this refinery, which is one of the largest and best equipped in Germany, may for reasons of public safety and convenience be closed altogether has been dispelled, the company having complied with all the requirements made upon them by the authorities. Nevertheless the Factory Inspector for the district has been instructed to keep a special careful watch over the working of the refinery, and see that all the conditions on which permission to erect this refinery have been granted, are strictly observed. The position is a very difficult one for the company, and is brought about by the hostile attitude of the communal councils of the district, who fear that the district may be depopulated owing to the refinery.

◆

ACCIDENT TO THE "LOUTSCH."

The Russian oil-tanker "Loutsch," bound from Batoum to Havre, stranded last Saturday on the Diana Shoal, near Gallipoli. Her position was very dangerous, and after the salvage steamers had made several attempts at refloating, the tanks were emptied of 400 tons of oil. She was refloated and anchored.

THE AMERICAN OIL FIELDS DURING 1908.

STATISTICS AND DETAILS OF THE PAST YEAR'S OPERATIONS.

Inasmuch as the American fields furnish the largest portion of the world's production of oil, the details concerning the operations in the various American States during the past year are full of interest, especially to those who closely follow the march of progress in our several important producing countries.

It has been a foregone conclusion that America's oil production for 1908 would rank as a record figure, but few there are who imagine that it would reach, and even exceed, 170,000,000 barrels. When the exact statistics are published, we are very much inclined to believe that it will somewhat exceed this figure, yet for general purposes, we believe this may be taken as correct—it is certainly not over the mark. The production in the several fields we would set out as under:—

Field.	1908. In Barrels.	1907. In Barrels.
Mid-Continent	50,000,000	45,000,000
California	45,000,000	40,000,000
Illinois	35,000,000	24,000,000
Pennsylvania, West Virginia, etc...	24,000,000	25,000,000
Texas and Louisiana	16,000,000	16,000,000
The Lima Fields (Indiana and Ohio)	6,000,000	7,000,000
Totals ..	176,000,000	157,000,000

The Mid-Continental fields produced the largest quantity of oil, and therefore must rank as the most important fields at the present time in America. It must be admitted that during the year there were no remarkable developments in these territories, while drilling was greatly diminished when compared with that in progress during the two years immediately proceeding. In all, something like 1,600 new wells were brought in, and they considerably assisted toward bringing the production up to the substantial figures at which we have estimated it.

The Glenn Pool still remained the centre of attraction, and its production aggregated 50,000 barrels each day throughout the year. Another district which was very active was the Alluwe shallow pool, and here, an extension of the producing territory northward, greatly increased the yield of this shallow territory.

The Prairie Oil and Gas Co., as in former days, was the chief purchaser of crude oil, its total runs for the year reaching 33,000,000 barrels. Of this amount, it forwarded 25,000,000 barrels to Standard refineries at Neodesha, Kansas, Sugar Creek, and its large refineries at Whiting, Ind., and the remainder went into its own storages. The oil which the company had in storage was frequently added to during the twelve months, and at the end of the year, according to Mr. E. Haworth, the State Geologist of Kansas, the quantity in stock was almost 39,000,000 barrels. Both the Texas Oil Co. and the Gulf Oil and Pipe Line Co. made considerable purchases of crude oil in the Mid-Continental fields during the year, those of the latter company being about 500,000 barrels in excess of the purchases made by the Texas Co., while the independent refiners and shippers, and various parcels of crude fuel oil taken during the year reached to 6,000,000 barrels. The total production of the Mid-Continental fields therefore for the year, purchased and dispatched from or stored in the field, as we have stated above, may be summarised in the following table:—

Prairie Oil and Gas Co.	33,000,000
Gulf Oil and Pipe Line Co.	5,600,000
Texas Oil Co.	5,000,000
Independent Refineries, Shippers, etc. ..	6,400,000
Total, in Barrels ..	50,000,000

The item of 6,400,000 barrels may perhaps be worthy of explanation. At the present time there are 25 independent refineries in existence, 17 of these being situated in Kansas and eight in Oklahoma, but these collectively consumed not more than 3,000,000 barrels during the year, while the quantity of crude shipped by small concerns or consumed for fuel purposes in the interior of the States may be placed at about 3,400,000 barrels for the year. It may be mentioned that many of the large power plants consume oil fuel, and prominent among these are the large Portland cement plants in Ellis county, Kansas.

The Californian field ranks second in point of production among the American fields during 1908, and its total yield for the twelve months may be taken at approximately 45,000,000 barrels, or an increase of about 5,000,000 barrels over the figures for 1907. Development work has been pushed forward at a rate almost unknown in the past, for the market has been very firm with prices constantly on the increase. For instance, during 1906 the average price of Californian oil was under 30 cents per barrel, in 1907 with a considerably increased demand it rose to 37 cents, but for last year a very low average will place it at 50 cents. This fact alone has naturally had a great effect upon the State's oil industry, and it was only to be expected that production would be pushed forward with all possible haste. The old producing territory is receiving the drill very freely, while in quite unproven localities, development work is proceeding as quickly as the difficult strata will allow. Some of the operating companies have almost doubled their oil production during last year, and those that twelve months ago were among the "speculative" concerns, have now entered the producing, and what is more, the dividend-paying list. To-day the old difficulties of transport are all but overcome, and pipe lines connect the large fields with the seaboard or the large refineries, and this in itself has given a tremendous impetus to operations. During the year one important trunk line was completed, this having been laid from the Kern fields to Port Costa. This line is 280 miles long, and, as was mentioned in the Review of January 2nd (page 8), it is an eight-inch rifled line, and is owned equally between the Associated Oil Co. and the Southern Pacific Railroad. This line is the second constructed from the Kern field, and thus the transport of oil is now attended with ease. In the Kern River field, by-the-bye, there are over 1,000 producing wells to-day, but their individual production is not large, a fair average being about 35 barrels to the well daily.

In the Coalinga field, on the other hand, though there are only about 400 wells in the producing stage, their average daily yield is upwards of 80 barrels, and in the Santa Maria locality the wells are most prolific, a conservative average of the Santa Maria and the Lompoc wells being nearly 300 barrels daily. During the past year, considerable wild-catting has been proceeding, and the results thus far have more than justified the attempts to find productive oil strata outside the present defined limits. Between the Coalinga and Sunset fields, this prospecting work has been very extensive, and quite a new region, with great possibilities, has been opened up.

The total year's production, as given on the preceding page, works out at a monthly average of slightly under 4,000,000 barrels, but there were several months last year when this figure was exceeded, the largest production of any month being in August when the figures were 4,128,000 barrels. One half of this was supplied by the Coalinga and Kern River fields, each territory running very close to the other, though taking the year through, the Kern field doubtless supplied more than the Coalinga territory.

As readers of the Review are well aware, the difficulty of finding an outlet for the Californian product, has now quite vanished, and to-day the demand is quite up to the production, little or no oil going into storage tanks. The demand from the Far East has done not a little to bring this about, and the Japanese importers have placed enormous contracts for Californian oil for future delivery, the product from the Santa Maria field having come in for the greatest attention in this case.

As to the outlook for the present year, it is of a most satisfactory nature. Prices are moving steadily upward, and oil prospecting, even in regions not as yet opened up, is, under all circumstances, a justifiable policy. There is every reason to believe that as a result of the present year's operations, the past year's record for California will be improved upon.

Turning now to Illinois, the increase in the 1908 production over that of the preceding year was the largest registered in any American field, approximately amounting to 11,000,000 barrels. Mr. H. Foster Bain, of the Illinois State Geological Survey, who has followed the Illinois oil industry as carefully as anyone, is inclined to place last year's production at nearer 40,000,000 barrels, but in any case, our estimate of 35,000,000 barrels production can be taken as substantially correct, and possibly much nearer the mark than that of Mr. Bain. The detailed pipe line runs and the miscellaneous receipts of the Ohio Oil Co. for the year averaged almost 3,000,000 barrels per month, though for May they exceeded 4,000,000 barrels. The bulk of the miscellaneous receipts, which for the year came to something like 7,000,000 barrels, consisted of oil purchased in tanks when leases were transferred. During the year no additional pipe lines were laid into the field, though the Pure Oil Co. is now laying a line to connect with the Tidewater line.

At the beginning of the year there were close upon 10,000 wells in Illinois, and of these 1,400 were dry holes, and during the year 3,200 wells were drilled and 548 dry holes encountered, Crawford county as heretofore claiming the greatest attention, being responsible for the bringing in of over 2,000 of the new wells. The year witnessed considerable activity in the endeavour to extend the producing limits of the different fields embraced in Illinois, and of this wild-catting, the principal result was the commencement of the production in Randolph county. As a whole, the past year may be said to have been quietly prosperous, and the outlook for the present year is very encouraging.

We come now to the Appalachian field, embracing Pennsylvania, New York, West Virginia and Eastern Ohio. This centre of high-grade oil production has for years been declining in its production, and for 1908 a further decrease of 1,000,000 barrels is noted. The production in 1906 was 27,000,000 barrels, and in 1905 it figures at 28,400,000 barrels, so it will be seen the decline has been consistent for years. The continued drought of last year, and the resulting lack of water caused many of the pumping wells in the Allegheny and Pennsylvanian fields to stand idle, while drilling operations were also seriously retarded. On the other hand, there were many successful drillings in Ohio and West Virginia, and these greatly assisted to help up the production; but for these, the total yield for the year would have shewn a rapid and very substantial decrease. From time to time the Review has published monthly statistics and thus there is now no necessity to go into these details again. Every thing points to the fact that in the future West Virginia will play an increasingly important part as the centre of developments in the Appalachian oil field. In the south-western part of the State there is a large amount of undeveloped land, and it is this portion of the territory that is now attracting so much attention.

Texas and Louisiana collectively produced in 1908 about the same quantity of oil as in 1907. Taking Texas alone, the year's operations resulted in a decrease of about 500,000 barrels, but Louisiana more than made good this decrease, and so the united production for the year may be taken as shewing a slight increase. Matters throughout the twelve months call for no particular comment, inasmuch as no important strikes were made, nor did any producing regions either materially extend or diminish. At the commencement of the year, many hopes were based upon the practically virgin territory of the Anse Le Butte field, but after the expenditure of a large sum in development, the only good producer brought in was the initial well. There was at one time considerable activity in the Caddo locality, and here production went up, though not to any appreciable amount. The Humble field shewed signs of improvement during the year consequent upon the active development of the northern portion of the field, and about 250 wells were brought into the producing stage.

It is unlikely that there will be any shrinkage of the output for 1909, though it is contrary to general impression that there will be extensive drilling activity in view of the fact that the present production equals the demand.

The Galician Petroleum Industry during 1908.

TRANSLATED . . .
FROM . . . .
"PETROLEUM." .

THE PRESENT CRISIS AND HOW IT WAS BROUGHT ABOUT.

The year 1908 may be designated as the most eventful one in the history of the Galician petroleum industry. It yielded a crude oil production of unprecedented volume and consequently an almost complete depreciation of the product, which in its turn has led to a movement foreshadowing the dawn of a new era for the industry.

The crude oil production for the year at Boryslaw-Tustanowice has reached, and probably exceeded, the enormous total of 1,580,000 tons, whilst the deliveries from Boryslaw, which represent the quantity absorbed by the market, amounted to only 1,050,000 tons which means that the production for 1908 alone left an unsold surplus of about 530,000 tons. Even if we take into account the quantities of crude oil delivered from Boryslaw by pipe line to the refinery of the Galicia Co. at Drohobycz and also the small quantities not included in the above total deliveries, there will still be an over-production in 1908 of about 450,000 tons, which, added to the balance of the unmarketed oil of previous years, has completely filled up all storage room at Boryslaw, and unless the deliveries increase and the production diminishes, the industry will come to an absolute *impasse.*

It is clear from the foregoing that measures of relief to the industry must deal with conditions affecting production, storage accommodation, and marketing of the crude and products. In the nature of the petroleum industry it is impossible to foresee the amount of the production, and no forcible measures can hinder its growth. To stop the working of existing wells or to cause by means of restrictive measures the owners to stop their wells, would only aggravate the crises, as capital already invested must be allowed to get a return, and besides, the responsibility of throwing a very large number of men out of employment by ordering the closing of wells is too great for anyone to assume. It is, however, quite possible and advisable to restrict or prohibit fresh boring for a certain period and previously absolving parties under boring contracts from any responsibility under such contracts.

A comparison of the monthly deliveries last year with the crude oil prices, shews that the largest deliveries were not made in the months of the greatest output, but when prices were at their lowest. This proves that the refiners, making use of the favourable opportunity, have made large purchases of oil at extremly low prices, on the undertaking to remove the oil at once. In this way, the refineries laid up large stocks of crude oil and could thus view with equanimity further development of the situation. The result of this amassing of stocks shewed itself in diminished deliveries in subsequent months.

The formation of small companies with small funds, which are generally exhausted by the time oil is reached at 600 or 700 metres and in some cases even drill on money received as advances on future crude oil, which of course they sell very cheap, could be prevented by the passing of a law prohibiting the starting of a bore hole unless a certain minimum amount of capital is provided for the purpose. The making of advances on crude oil relieves the situation to some extent, but of course the crude oil cannot be stored for an indefinite number of years, and as not all the producers are members of the Crude Oil Union, which is intended to monopolise the sale of crude oil, the refiners are always able to get crude oil at prices suitable to them.

The past year has clearly demonstrated how utterly unprepared Boryslaw is for a large production, inasmuch as all the storage accommodation was completely filled up, and the only condition upon which a crude oil union could be formed was an undertaking to immediately erect fresh storage accommodation, and then take steps in the direction of extending the market for the crude oil. A careful consideration shews that of all the measures

The Tank-Car Railway Sidings at Boryslaw.

adopted or contemplated for the relief of the crisis, those having as their object the extension of the market are the only really effective ones. The first step in this direction was the conclusion of the contract with the State railways for the supply of liquid fuel, but it only takes effect in 1910, which is still a long way off. The production in the meantime is not diminishing, and the producers are in as great a need as ever It is certainly possible to bring about an increased export of oil to Germany, the more so, as German capital is now very heavily interested in the Galician petroleum industry, and the German producers are entitled to some protection in their own country. For reasons of commercial policy, Germany cannot introduce a differential customs tariff in favour of Galician oil, but it could further reduce the railway rates for Galician oil and favour it in other ways. The Austrian railways in turn might also take steps to facilitate the transport of Galician oil in greater quantities by providing more adequate transport facilities. It is to be hoped also that the producers themselves will also benefit by the experience of the past year, and cease to consider the petroleum industry, as many of them do, as a lottery, in which money is either lost or yields a quick and large profit, but will rather come to view it as an industry for the investment of capital.

In the Galician Fields.

The progress of the production at Boryslaw and Tustanowice month by month in 1908 was as under:—

	Boryslaw.	Tustanowice.	Total.
January	20,450	76,170	96,620
February	18,800	73,340	92,140
March	25,280	90,160	115,440
April	25,980	98,040	124,020
May	26,940	108,510	135,450
June	23,280	128,140	151,420
July	23,660	106,280	129.940
August	22,800	112,070	134,870
September	22,450	122,470	144,220
October	21,960	141,010	162,970
November	18,930	132,150	151,080
December	22,080	120,130	142,210
Total	272,610	1,308,470	1,581,080

The output of the largest producing properties in Boryslaw and Tustanowice in 1908 was as under (only over 10,000 tons):—

Boryslaw.

	Tons.		Tons.
Alexander	12,600	Moritz	12,450
Fanto	16,070	Nathan	23,820
Galicia	20,260	Ratoczyn	42,340

Tustanowice.

	Tons.		Tons.
Berthold	22,850	Naphta	10,690
Clay I. and II.	28,020	Laupenmuehlen	24,320
Hala	17,590	Annen	73,540
Hucul	18,600	Galic. Spolka	49,800
Ignatz	28,100	Isabella	15,390
Litwa	22,730	Karpathen Co.	113,530
Lauria	14,030	Mercedes	12,960
Montan	23,630	Ressegnier & Dr. Frankel	13,160
Parnes	27,150	Synge (Boxall & Meisel)	13,840
Salo	16,550	Wygoda	18,320
Sycylia	14,520	Alois	15,320
Triumph	16,410	Galicia I.	18,540
Trunkwalter	17,840	Iadwiga	19,390
Urycz Co.	58,830	Oil City	104,530
Wilno	48,400	Smolka	11,550
Banzay I. and II.	33,530	Sumatra	11,760
Barbara	10,950	Tsuschima	22,810
Bitum	17,180	Faust	10,660
Ewka	19,410	Pluto	33,710
Mukden	21,100		

The deliveries of crude oil by rail from Boryslaw in 1908 was as under:—

	Number of Cars.	Quantity. Tons.
January	4,999	68,830
February	4,366	60,170
March	6,948	96,247
April	7,276	100,657
May	7,261	100,497
June	7,115	98,131
July	7,926	109,657
August	8,446	116,201
September	7,360	103,865
October	7,040	98,228
November	6,692	91,762
December	6,486	91,058
Total	81,915	1,135,303

There are other producing oil fields in Galicia besides Boryslaw and Tustanowice, such as Schodnica, Krosno, Urycz, Rogi, etc., the figures for which have not yet been published. Their aggregate yield is, however, comparatively slight, and cannot influence the general position of the Galician petroleum industry.

The following figures shew the movement of prices for Galician crude oil during 1908 (in kronen per ton) at Boryslaw:—

	Highest.	Lowest.
January	15·80	15·0
February	17·0	16·0
March	17·0	17·0
April	16·50	14·0
May	13·50	13·0
June	13·0	10 0
July	10·0	9·0
August	9·0	7·0
September	10·0	7·50
October	10·50	10·0
November	10·0	9·0
December	12·50	10·50

In May a downward movement set in in consequence of the striking of the prolific Annen and Oil City wells. The slump continued through June. In July commenced a temporary recovery of prices, followed immediately by a great drop. In September and beginning of October a permanent improvement set in upon the organisation of the crude oil producers assuming concrete form and beginning to shew tangible results in the shape of the erection of storage tanks and passing of the contract with the State railways. In November an artificial depression of prices was again brought about by parties who speculated on low prices and sought to cover themselves, but this was followed by an immediate recovery.

DRILLING OPERATIONS IN CHIHUAHUA.

For several years, says Vice-Consul C. M. Leonard, writing to the American Government from the Mexican State of Chihuahua, persistent reports of the existence of oil in the eastern part of the State of Chihuahua have been current. For the last three years an American company has been carrying on operations with a great deal of secrecy, but it is learned on good authority that they are sinking three wells, varying in depth at the present time from 1,400 feet to 3,285 feet. In one well oil sand to a depth or thickness of 40 feet has been encountered ; in the second it is reported three pay streaks have been cut, and in the third the oil-sand strata is said to be 120 feet thick. Oil has been found twice in the latter.

Adjacent to the lands mentioned, the Governor of this State, the Hon. Enrique C. Creel, owns large tracts of oil lands, and in an interview he informed me that he had received very favourable reports from engineers who had examined his property, shewing that the existence of oil is strongly indicated. He has given options on these lands to an American, who is now forming a company in the United States for exploiting them, and work is expected to commence soon.

Following is an analysis of a sample of oil obtained from this field :—

Naphtha and light oil	14·38
Kerosene light F. P. 110	31·05
Kerosene heavy F. P. 128	22·06
Lubricating oil	20·00
Paraffin	10·00
Total	97·49

The oil discovered is a fine paraffin base, said to be equal to the best Pennsylvania oil. The sand is of a grade known as Bradford (Pa.) chocolate sand. The lands upon which this oil is located are on the line of the Kansas City, Mexico and Orient Railroad, now under construction, and the line will reach the oil fields within twelve months.

The Government of the State of Chihuahua has offered $5,000 gold for the first oil well brought in producing a minimum of sixty barrels of oil per day.

The benefit to the State of Chihuahua, and in fact to all Northern Mexico, should oil be found to exist in commercial quantities, is incalculable. Kerosene sells in this market for 34 cents gold per gallon ; gasoline for 47 cents per gallon, the foregoing being wholesale prices. The cheapest coal obtained here costs $6·25 per short ton and as high as $9 per short ton for the best quality of bituminous coal. It will thus be seen that the matter of fuel makes the cost of manufacturing so high as to offer very little encouragement to such industries.

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P.A.B.

LATEST INFORMATION CONCERNING THE PHENOMENAL WELL OF MESSRS. S. PEARSON AND SONS IN MEXICO.

The phenomenal well belonging to Messrs. S. Pearson and Sons, which caused such havoc during the latter months of last year in and around Dos Bocas, now seems to be settling down to a mild stage of production. The poisonous gases which poured from the well after the fire became extinguished, caused considerable uneasiness among the inhabitants, but fortunately these have subsided to such an extent that efforts are now being directed towards saving the oil which still flows from the crater.

Messrs. Pearson have now constructed a small canal which leads from the crater, and this carries the oil into a reservoir. Here pumps have been installed and the oil is raised into a large earthern reservoir, where it is to be temporarily stored. The water which also pours from the volcano is led into another canal to Lake Tamiahua. It is estimated by Government officials who have visited the well that its oil output is now about 5,000 barrels daily.

The view here given shews the vast lakes which have been formed in the locality of the well, owing to the phenomenally large flow of oil.

◆

PRODUCTION OF ENGLISH COMPANIES IN RUSSIA.

Baku Russian Petroleum Co., Ltd.—The production for the week ended 16th January was 153,500 poods, or 2,475 tons ; and for the week ended 23rd January was 151,100 poods, or 2,436 tons.

Russian Petroleum and Liquid Fuel Co., Ltd.—The production for the week ended 15th January was 226,000 poods, or 3,644 tons ; and for the week ended 22nd January was 223,000 poods, or 3,595 tons.

Spies Petroleum Co., Ltd.—The production for the week ended 17th January was 161,685 poods, or 2,607 tons. The production for the corresponding week last year was 130,445 poods, or 2,103 tons. The output for the week ended 24th January was 162,580 poods, or 2,622 tons. The total production for the corresponding week last year was 139,030 poods, or 2,242 tons.

The European Petroleum Co., Ltd.—The production for the week ended 17th January was 152,444 poods, or 2,458 tons ; and for the week ended 24th January was 144,328 poods, or 2,327 tons.

THE PETROLEUM PRODUCTS DISTRIBUTING COMPANY OF ROUMANIA.

The Petroleum Products Distributing Co. has lately been joined by the following additional refineries: – M. Campeanu and Co. of Targoviste, having an annual allotment on the home market for the financial year 1908-9, of 1,929·6 tons; Dr. D. Goldstern of Baneasa, with an allotment of 1,351·8 tons; M. Predinger (Motor Fuel, Ltd.), of Ploesti, with 763·8 tons; M. Mitrany, Ploesti, with 226·9 tons; and Mr. Nachmias (Lumina) Ploesti, 186·8 tons.

Thus out of the total of 42,000 tons, which is the Government estimate of the consumption of illuminating oil in Roumania in the year 1908-9, and on which the allotments are based, the Distributing Co. now controls the following quantities: –

	Tons.
Steaua Romana	8,658·1
Aurora-Baicoi	4,616·3
Romano-American Co.	2,541
Colombia Co.	2,408·6
Aurora-Targoviste	1,323·3
M. Campeanu and Co.	1,929·6
Dr. D. Goldstern	1,351·8
Scarlat Parascheva	763·8
M. Predinger	763·8
M. Mitrany	226·9
Engineer Nachmias (Lumina)	186·8
Total	24,770

This quantity is equal to 59 per cent. of the total estimated consumption of 42,000 tons.

Of the refineries of any importance the following are still outside the organisation of the Distributing Co.:—

	Tons.
Vega Co.	4,745·8
Trajan Co.	2,447·2
Aquila-Franco-Romana	2,363·4
Astra	752
I. Grigorescu	839·1
Total	11·147 or 26½%

of the total estimated consumption. The remaining 14½ per cent., or about 6,000 tons, are held by very small refineries, who sell their oil only in the locality where they are situated.

Owing to the bad crops, the consumption of illuminating oil in Roumania is not developing in the way it was expected, and the total for the year will probably fall short of the estimate of 42,000 tons.

ROUMANIAN CRUDE OIL PRODUCTION.

DETAILS FOR DECEMBER.

According to provisional figures published by the *Moniteur du Petrole Roumain*, the production of crude oil in Roumania in December amounted to 96,000 tons.

The production of the leading firms in December compared to November was as under:—

	Dec. Tons.	Nov. Tons.
Steaua Romana	25,685	25,796
Regatul Roman	16,024	16,650
Concordia Co.	13,246	13,407
Romano-American Co.	9,221	7,242
Astra Co.	7,007	5,861
Trajan Co.	3,027	2,803
International Co.	2,940	2,921
Aquila Franco-Romana	2,211	2,011
Nafta Co.	1,631	1,636
Van de Werk	1,060	—
Seceleanu Bros.	941	1,537

By accepting the provisional total for December at 96,000 tons, we arrive at a total production of crude oil for 1908 of 1,150,283 tons, against 1,129,097 tons produced in 1907, an increase of 20,000 tons, or only 2 per cent.

The progress of the crude oil production in Roumania during the last two years is shewn in the following figures of monthly production:—

	1908. Tons.	1907. Tons.
January	100,591	82,122
February	90,307	89,020
March	97,969	98,618
April	93,588	95,387
May	99,792	101,849
June	88,620	93,068
July	98,638	96,312
August	97,765	97,639
September	99.494	96,565
October	96,519	99,451
November	91,000	87,470
December	96,000	91,596
Totals	1,150,283	1,129,097

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The Kitson-Empire Lighting Company, Limited.

. . ANNUAL STAFF DINNER. . .

The annual dinner to the staff of the Kitson-Empire Lighting Co., Ltd., took place on Friday evening, the 22nd inst., at the Café Monico, London, the convivial affair being largely attended and of a most successful nature throughout.

Mr. Arthur Kitson, the inventor of the oil light which bears his name, was in the chair, being supported by Mr. Scott Lings and Mr. St. George Lane Fox-Pitt (co-directors of the company), while the vice-chairs were occupied by Messrs. F. P. Daniels (secretary) and Graham Chubb (the firm's manager).

The *post prandial* proceedings were of a particularly pleasant nature, the toasts being interspersed by a very attractive vocal programme.

The toast of the evening—"The Kitson-Empire Lighting Co., Ltd."—was submitted by Mr. J. C. Ingle (Messrs. Ingle, Holmes, Sons and Potts, the company's solicitors), who said his memory was that evening carried back to ten years ago, when he met Mr. Kitson as a client, just preparatory to the formation of a syndicate to take over Mr. Kitson's invention. Those were the days of small things, but since then, Mr. Kitson's invention had made its mark, especially in America, and if they wanted evidence of the progress achieved since the invention was placed on this market, they had it in the large gathering of that evening. They had had their troubles, various interests had at various times to be reckoned with, but he was glad that evening to see the lion and the lamb sitting down together, for that fact to his own mind suggested that the future would be straight sailing. He wished the firm all possible success and asked the company to give a "bumper" to the toast, coupling with it the name of Mr. Arthur Kitson.

Mr. Kitson, in responding to the toast, said that they really did start from very small things and he believed their first staff dinner consisted of six persons. But year by year it had grown until that evening they had a staff of nearly fifty employés present. Their business had grown and with their progress they had their troubles, yet they had weathered the storm and now were on the road to prosperity. With regard to the oil industry, though the oil light was almost as ancient as the hills, going back before the Roman Empire, it was to-day the greatest lighting industry in the world, and that in spite of the great inventions of electricity and gas. It was a fact that each evening somewhere between eight and nine million oil lamps were lighted throughout Great Britain. In the Eastern countries, however—in Japan and India—they had nothing else but the oil light, and it would therefore be seen that millions upon millions of people used oil every evening for illuminating purposes. Thus it was not difficult to imagine how great was the oil industry which made such lighting possible. Even with the Kitson light, they had evidence of the great field there was for unlimited extension. Only just recently they had equipped the Parliament House in Iceland with their light—the first artificial light, he was told, that had been introduced there. They had also lighted up Port Arthur until the time of the siege, and quite recently they sent a consignment of the Kitson lamps to the forests of Brazil and Central America, to the order of Lord Rothschild, there to be used in assisting the collection of rare butterflies and moths for his lordship's collection.

The oil lighting industry had certainly grown against tremendous odds. For instance, if they happened to invent an improved gas light they would find they had hundreds of gas companies ready to take it up and push its sale. But with oil lighting inventions there was no such help to be given. To his own invention, there was not one single oil company in the country which had given the slightest assistance. Though the companies interested in the oil trade of this country had not offered the slightest assistance, they had been strongly opposed by both the vested interests in gas and electricity. He remembered the first experiment they tried in London for the lighting of Portland Place. That experiment was carried out at the suggestion of Mr. Debenham, who was connected with the Lighting Committee of Marylebone. But there they had enemies to the light, and owing to the fact that the lamps were tampered with at night and the boxes containing the oil Reservoirs burst open, they had to provide a force of detectives in order to try to prevent destruction of the lights. So far as their lighting experiment went, it was very satisfactory and was spoken very highly of by the residents. Well, things went on until the Marylebone Electric Light Co. tried to sell their plant to the municipality, and the chairman of that company was also the chairman of the municipal lighting body. To cut a long story short, it was easy to see why they had eventually to remove their lamps. That was the opposition they had met with all over. They heard a lot about the corruption in the United States, yet as one who had lived long in America, though the standard of business in this country was certainly very much higher than in the States, there were influences at work in England which it was very difficult to get hold of. If they in the States desired to get a certain measure through Congress, then all that was necessary was to invite the members to a dinner, and place five, ten, or it might be hundred dollar bills under each plate—it was simply a matter of money. In England, however, it was done in a different way. They had to get themselves elected to the municipality and the end was then achieved just the same. It was a fact that there was scarcely a municipality in England to-day which had not among its members a representative of either the gas or the electric light interests, yet they had to search in vain for representatives to push forward the interests of oil lighting. Well, in addition to the opposition of which he had spoken, they had the insurance companies against them. The insurance companies had given them a very great deal of trouble, and in America they had had a terrible fight with them, but eventually they were persuaded that the oil lamps were not dangerous. To prove that the Kitson lamp was not dangerous, the speaker gave the insurance authorities a little experiment, for they had urged that the oil reservoir might take fire and cause very disastrous results. He put a lighted taper into one of the reservoirs and of course the oil put the light out. Their lamps were now allowed by the insurance companies to be used in any buildings, for it was recognised that they were very safe methods of illumination, but in England, they still had the objections of the insurance companies. For instance, they were not allowed to exhibit their lamps either in the Agricultural Hall or Olympia. It would therefore be seen what a great amount of uphill work their company had had to face in order to achieve progress, and yet, though the large oil companies in this country had considerably benefited from the introduction of the Kitson lamp and the extended use of oil, they had not given their firm the slightest help or encouragement.

The speaker then proceeded to briefly refer to the new patent acts, which he explained worked like a two-edged sword. It was supposed to be for the benefit of the poor inventor, but really it acted against him. Under the present patent acts the inventor could scarcely pay the amounts which the governments of the different countries required of him: in his own case he had spent over £10,000 in taking out patents for the Kitson light throughout the world, to say nothing of keeping those patents up and working them. As to the new act, he has an instance of how that worked recently in Vienna, where he found that now it was demanded that foreign patented articles had to be manufactured there on a proper and commercial scale. He was told, that that was expected of all inventors now in England and so it would be demanded of all who went to Vienna. Therefore in the future, even more so than in the past, the inventor would have to be a very considerable capitalist before he would carry out his patents all the world over.

Well, it would be interesting to those present to know that in the face of many difficulties, their lamp had increased in popularity until now there were at least one million used throughout the world. Their business in this country was originally in the hands of the Kitson Lighting Co., of Great Britain, but difficulties began to crop up, and finally the company became known as the United Kingdom Lighting Trust. A certain amount of friction then sprang up, and the Empire Lighting Co. was started as a kind of opposition. Well, he was pleased to say that the days of friction were passed, and the interests were all working under one roof, and under such conditions the future was exceedingly bright. To-day, they were busy making experiments with regard to domestic lighting, and he hoped that the results would create a wonderful improvement in the methods of domestic lighting.

In conclusion, he thanked the company for the way in which the toast had been honoured.

Mr. F. P. Daniels then submitted the toast of the directors of the company, and, in doing so, said that in the course of time it was inevitable that changes should occur, but it was pleasing in their case to think that change meant progress. With the advance of their business, there also came the increase of responsibility, and so Mr. Kitson had thought it well to take the advantage of the skill and intelligence of other gentlemen who were now associated with him upon the directorate of their company. If there were any truth in the old adage that two heads were better than one, they might justly assume that four heads were still better. Well, they were now almost at the parting of the ways, for many who had been associated together for a long time were going to fields and pastures new. Some were to be stationed amid the agreeable air of Stamford, while others would be located in the petrol-laden atmosphere of Temple Bar, yet whether in Fleet Street or Stamford, he ventured to assure the directors that there would be no change in their sense of duty to the directors nor their interest in the company. He trusted that all would long remain associated together in order to assist toward the extension and ever increasing prosperity of the Kitson-Empire Co., Ltd.

The toast having been enthusiastically honoured, Mr. Scott Lings replied, expressing regret at the absence of the company's chairman—Mr. Charles Gray—from the festivities that evening. The speaker proceeded to explain that he had retired from the chairmanship of the company simply and solely that the position could be taken by Mr. Gray, who, residing at Stamford, could keep an eye upon the manufacturing portion of the business, which was shortly to be transferred there from Willesden. But it was little use having a board of directors to direct the company unless they had the active co-operation of the members of the staff. It was essential and important to the welfare of any concern that the staff should have their heart and soul in their work, and he was pleased to think that they had a good staff who were bent upon doing all they could toward the success of the firm.

The Chairman also spoke highly of the work of the staff, and associated with the toast the name of their works manager—Mr. Graham Chubb—who, in a few well chosen words, replied.

The remaining toast was that of "The Visitors," to which Mr. Leon Gaster replied. This gentleman spoke briefly of the three principal systems of illumination, and pointed out that the best illuminating power to be satisfactory was that which the consumer really wanted, and looked upon from that point of view, he was certain that the Kitson lamp had nothing to fear.

The singing of the National Anthem brought a most pleasant evening to a close.

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The Fullerton Field.—This field is rapidly taking a front place among California's oil producing territories, and shortly may be expected to furnish a production of nearly 20,000 barrels per day. In the richest section of the field, several wells are now at good depths and will shortly be brought into the producing stage. The latest completions have started off at 700 and 500 barrels per day.

CLASSIFIED IMPORTS INTO UNITED KINGDOM UP TO JANUARY 25th, 1909.

IN GALLONS.

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COUNTRY.	ILLUMINATING.		LUBRICATING.		RESIDUALS.		GAS OIL. (Solar)		BENZINE.		FUEL OIL.		OTHER DESCRIPTIONS.		TOTALS.	
	Since Jan. 11.	From Dec. 28.	Since Jan. 11.	From Dec. 28.	Since Jan 11.	From Dec. 28.	Since Jan. 11.	From Dec. 28.	Since Jan. 11.	From Dec. 28.	Since Jan. 11.	From Dec. 28.	Since Jan. 11.	From Dec. 28.	Since Jan. 11.	From Dec. 28.
Austria ...	—	—	—	—	26,730	96,220	—	—	—	—	—	—	—	—	26,730	96,220
Belgium ...	70	70	24,590	41,940	—	—	—	—	—	—	—	—	—	—	24,660	42,010
Canada ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dutch India.	—	—	—	—	—	—	—	—	2,577,300	2,577,300	—	—	—	—	2,577,300	2,577,300
Germany ...	44,420	75,860	40,880	63,290	—	—	—	—	—	—	—	—	400	4,640	85,700	143,790
Holland ...	300	300	640	640	—	—	—	—	5,000	5,000	—	—	1,040	4,940	6,980	10,880
Roumania ...	—	139,750	—	—	—	—	—	—	—	938,360	—	—	—	—	—	1,078,110
Russia ...	1,805,930	2,942,360	14,970	20,510	—	—	—	—	886,420	886,540	—	—	59,530	59,530	2,707,320	3,849,410
U.S.A. ...	2,347,780	8,099,810	2,492,730	4,601,030	2,410	7,910	1,847,740	6,763,620	—	—	—	—	—	948,920	6,750,190	20,480,820
Other Countries	—	—	4,880	4,960	—	—	—	—	—	—	—	—	1,000	1,000	5,880	5,960
	4,198,500	11,258,150	2,578,690	4,732,370	29,140	104,130	1,847,740	6,763,620	3,468,720	4,407,200	—	—	61,970	1,019,030	12,184,760	28,284,500

RUSSIAN NOTES.

Liquid Fuel.—The Caucasian railways in 1908 consumed 60,580,000 poods of fuel oil purchased from Baku refiners

Kerosene Pipe Line Statistics.—The following were the quantities of kerosene received by the pipe line pumping stations at Baku in 1908:—Baku White City Station, 11,726,936 poods; Central Station, 5,611,295 poods; and Baku Black City Station, 10,335,863 poods; total, 27,674,094 poods.

The Moscow Petroleum Company, operating in Grosny, in 1907, its eleventh financial year, incurred a loss of 70,302 roubles, bringing the total loss to date up to 733,641 roubles. The company has debtors for 7,280 roubles, and creditors for 1,132,585 roubles. The nominal capital is 3,000,000 roubles.

To Operate at Tcheleken.—About the middle of December a new company was formed at Baku for the exploitation of petroliferous lands at Tcheleken, for which purpose plots of land have already been leased. The founders are: General N. N. Lavroff, Mr. Bulgakoff, engineer, J. F. Melik-Dadaeff and V. S. Ananaiantz.

Neva Petroleum Company.—A new company is now being organised in St. Petersburg under the title of the Neva Petroleum Co., with the object of prospecting for and producing petroleum in the Baku district. The capital is to be 1,000,000 roubles, the founders are: Lieut.-Gen. V. I. Golostchanoff and Messrs. V. I. Millschitz and V. M. Abaza.

The Chatma Oilfield Company.—The fourth annual meeting of the Chatma Oilfield Co. Ltd, will be held on the 15th February next, at noon, at Watergate House, Adelphi, W.C., to adopt the report and accounts, elect directors, and consider the position and prospects of the company. The registered office of the company is in Henrietta Street.

Deposits at Bogdad.—Petroleum deposits have been discovered on the banks of the river Khonis Zkali in the Bogdad district of the province of Kutais. Several Baku firms have sent representatives to investigate the matter on the spot. A meeting of the local inhabitants was to be held on the 28th January to decide upon the best means for exploiting these deposits.

Messrs. Mantascheff and Company have in their ninth financial year 1907 had a gross revenue of 16,754,074 roubles, which left a nett profit of 1,882,824 roubles. A dividend of 5 per cent was declared. The company has debtors for 2,802,159 roubles and creditors for 8,594,506 roubles. The nominal capital is 22,000,000 roubles, the amortisation fund stands at 6,220,902 roubles, and insurance fund 399,983 roubles.

Tank Waggon Statistics.—The following number of tank waggons were in use in 1908 for the dispatch of oil from Baku: for through service with the interior of Russia, 320 for kerosene, 39 for residuals, and 155 for lubricating oils. For the local Caucasian service (chiefly to Batoum): for kerosene 859, lubricating oils 1,327, residuals 1,937, and benzine 30 tank waggons.

New Leases for Messrs. Nobel.—The Minister of Industry and Commerce has sanctioned the granting to Messrs. Nobel Bros., without auction, the leases for the following petroliferous plots:—Plot No. 1, adjoining the Mud Vulcano at Pilpilia; Plot No. 2, near Achtyrka Mountain, two plots in locality; No. 3 at Pilpilia; and three plots, No. 5, near Boz-Dag Hill. In addition, Nobel Bros. have received the documents for the concession on plots Nos. 7, 22 and 26 on Holy Island.

In Favour of Contract Boring.—Messrs. Mantascheff and Co., following the example of other firms, have decided to discontinue drilling for their own account and to entrust the work to boring contractors, which decision will lead to the discharge of a large number of workmen. The Balakhany men will be most largely affected. Under threat of a general strike, the men have obtained the consent of the firm that the contractors shall not commence work before a settlement between the firm and the workmen in regard to the proposed discharges has been arrived at.

Batoum Shipments.—The following were the shipments of petroleum products from Batoum during the week ended January 3rd (o.s.):—

	Illuminating Oil.		Other Products.	
	1908.	1909.	1908.	1909.
To Europe ..	264,000	998,000	416,000	123,000
To the East ..	319,000	170,000	1,000	2,000
To Russian Ports	103,000	106,000	—	1,000

The shipments of residuals to Europe on 3rd January, 1909, was 33,000 poods.

ROUMANIAN NOTES.

The Credit Petrolifer is now establishing a receiving and pumping station at Burloi for handling crude oil from Calinet and Burloi.

Prospective Property Transfer.—Messrs. Seceleanu Bros. are again engaged in negotiations for the sale of their property to a Belgian group, which is already interested in Roumanian petroleum enterprises The price under consideration is 2,500,000 francs

Fire.—On January 10th the derrick and plant on borehole No. 4 of the Trajan Co. at Mislisora was completely destroyed by fire, involving also the destruction of adjoining stables. This well was yielding by baling about four tons of oil daily.

Developments at Policiori.—Wells Nos. 3 and 4, of the Steaua Romana Co. at Policiori, continue to yield about 20 tons daily, which is considered satisfactory. Well No. 5 is now in drilling, whilst preparations are now in progress for starting well No. 6.

Stagnation at Doftanet.—Exploitation at Doftanet is in a state of stagnation and the output of some of the wells is diminishing. Some of the firms operating in this locality are beginning to dismantle their boreholes, intending to concentrate their activity on the new prolific fields of Calinet, Burloi and Bordeni.

The Aurora Re-organisation.—The negotiations for the re-organisation of the Aurora Co., which at a certain time were thought to be nearing a successful end are still dragging on and the prospect of a final break up of the concern is not precluded. The difficulties arise chiefly from the attitude adopted by the Dutch group holding the first mortgage debentures.

To Amend the Petroleum Laws.—The Roumanian Minister of Industry has drafted a Bill for the amendment of the Petroleum Lands Consolidation Law. This bill provides in the first place for a larger royalty to the peasant owners and also that the hearing of the application for consolidation shall take place on the plot to be consolidated and not in the office of the mayor of the district, as is done under the existing law.

Drilling Activity.—Well No. 17 of Messrs Stefanescu and Co., at Stalpi-Gropi, has suddenly ceased producing, probably on account of the pressure of water. This well has altogether produced 2,000 tons of oil. The Romano American Co has started its well No. 34 (E.P.C.) The Concordia Co. is also drilling its No. 141 well, which is about 100 metres to the north of the No. 9 well of Messrs. Stefanescu and Co., also in drilling.

Burloi.—Mr. Van de Werk's prolific well No. 3 at Burloi, which had lately diminished its yield, on the 10th January spouted for three hours, and yielded more than 300 tons of oil, part of which ran to waste in the Telega Valley. The well is now corked up with sand. In the neighbourhood of this well the Steaua Romana is preparing to drill its No. 221 well, and the Steaua's No. 220 is producing five tons daily. Well E_1 of the Concordia Co. is yielding a similar quantity, and No. 183 about three tons daily.

Prolific Calinet.—Well No. 30 of the Trajan Co., at Calinet has struck oil, and settled down to a yield of between 25 and 30 tons daily. The Steaua Romana's prolific well No. 209 continues to spout intermittently, yielding 50 to 60 tons daily. Up to the present this well has produced altogether about 11,000 tons of oil. The total daily production of the Steaua Romana at Calinet and Burloi now amounts to approximately 120 tons daily. The Concordia Co.'s well No. 171, having ceased to produce, is now being deepened. This company has two wells at Calinet, each yielding between 30 and 40 tons daily. A considerable number of new wells are in drilling in this locality.

Activity at Mislisora.—Well No. 96 of the Colombia Co. on the Paturosa property has struck oil at a depth of 254 metres, and obtained a daily yield of about 30 tons. Well No. 86 of the same company has likewise struck oil with a yield of 20 tons daily, whilst a further five boreholes are expected to strike oil shortly. To the west of this property is a plot operated by the Concordia Co, where the latter has struck oil in its well No. 278, at 152 metres and obtained a yield of 15 to 20 tons daily. The Aquila Franco-Romana Co., having deepened its borehole No. 34, struck a second oil stratum at 224 metres with a yield of 10 tons daily This company is drilling four more wells in this locality.

LATEST QUOTATIONS OF PETROLEUM SHARES.

ENGLISH COMPANIES.

This list is restricted to companies who have paid dividends or who are producers.

Company.	Capital Paid Up	Value of Shares.	Latest Prices.
Assam Oil	£205,000	£1	$\frac{3}{4}-\frac{7}{8}$
Baku Russian Petroleum ..	£750,000 Ord.	£1	0/3-0/9
,, ,, ..	£650,000. 5½% Pref.	£1	6d -1/0
Bibi-Eybat Petroleum Co. ..			6/0-7/0
Californian Oilfields	£385,000 Ord.	£1	$4\frac{7}{8}-5\frac{1}{8}$
Commonwealth Oil Co. Pref	fully paid (Prem.)		$\frac{3}{4}-\frac{7}{8}$
,, ,, Def..	£1 fully paid		$\frac{3}{4}-\frac{7}{8}$
European Petroleum	£550,000 Pref.	£1	1/0-2/0
,, ,, ...	£550,000 Ord.	£1	0/3-0/9
,, ,, ...	£376,000 Deb.	£100	68-72
Russian Pet. & Liquid Fuel ..	£500,000 6½% Pref.	£1	2/0-3/0
,, ,, ...	£600,000 Ord.	£1	2/0-3/0
Schibaieff Petroleum ..	£575,000 6% Pref.	£5	$\frac{3}{16}-\frac{5}{16}$
,, ,, ...	£575,000 Ord.	£1	0/6-1/0
Shell Transport & Trading ..	£2,000,000	£1	46/0-47/0
,, ,, ,, ..	£1,000,000 Pref.	£10	$10\frac{3}{4}-10\frac{7}{8}$
Spies Petroleum Company ..	£387,500	10s.	10/0 10/6

RUSSIAN COMPANIES.

Company.	Nom. Value in Roubles	Quotations on Jan. 25th	
		Lowest Roubles.	Highest Roubles.
Baku Naphtha Co.	100	308	310
,, ,, ,, (issue of 1908) fully pd.	100	—	285
Balakhany Naphtha Co.	250	—	—
Caspian Society	1,000	3,875	3,925
Mazout Co.	250	—	—
Melikoff, A. C.	250	—	—
Mirzoeff Bros.	250	—	—
Naftalan Co.	250	—	—
Naphtha Co. "Kavkas"	250	—	—
Naphtha Trading Co., A. I. Mantacheff & Co	250	134	135
Neft Co	250	—	—
Nobel Bros.	5,000	10,250	10,325
,, ,, ...	250	—	—
Rops and Co. V...	250	—	—
Russian Naphtha Co.	250	—	—
Society Mazout	250	—	—
Ter-Akopoff Co.	250	—	—
Tumaieff & Co., J. G.	250	—	—
Volga-Caspian Naphtha and Trading Co	250	—	—
,, ,, ,, (Second Issue)	250	—	—

SCOTCH COMPANIES

Supplied by Messrs. MACLEAN AND HENDERSON, STIRLING.

Company.	Capital Paid Up.	Value of Share.	Latest Prices.
Broxburn Oil Co., Ltd., Ord. 17/- pd	£235,000	£1	£2 5s. 0d.
Do. 6% Cum. Pref. ..	£100,000	£10	£12 8s. 9d.
Burmah Oil, Ord.	£1,100,000	£1	£4 17s. 0d.
Do. Pref.	£250,000	£1	£1 8s 0d.
Dalmeny Oil Co., Ord. (7 paid) ..	£37,800	£8 10s	£5 0s. 0d.
Do. 5% Pref ..	£18,900	£7	£4 12s 0d.
Lobitos Oilfields, Ltd. (£1).. ..	£275,000	£1	£1 4s. 10½d.
Oakbank Oil Co., Ltd., Ord.	£170,000	£1	£1 19s. 3d.
Do. Pref. (fully paid)	£36,980	£1	£1 4s. 6d.
Do. Do. (10s. paid)	£63,020	£1	£0 18s. 6d.
Pacific Oilfields, Ltd. (£1)	£200,000	£1	£1 3s. 6d.
Pumpherston Min. Oil Co., Ld., Ord. (17s. paid)	£110,500	17s.	£12 0s. 0d.
Do. 6% Cum. Pref.	£100,000	£10	£14 0s. 0d.
Tarbrax Oil Co., Ltd. Ord. (£1 pd.)	£38,350	£1	£2 19s. 6d.
Do. 6% Cum. Pref.	£35,000	£1	£1 4s. 9d.
Young's Paraffin Co., Ltd., Ord. ..	£452,808	£4	£3 15s. 6d.
Do. "B" Deb...	£150,000	£100	£178 10s.

DUTCH COMPANIES.

Company.	Latest Quotations (per cent.)	Florins
Arnhemsche Petroleum Mij.	$35\frac{3}{4}$	1,000
Aurora ,, ,, (Deb. 5%)	78	—
Campina Poiana Mij.	—	—
Dordtsche Petroleum Mij. (Pref.)	$149\frac{3}{4}$	—
,, ,, ,, (Ord.)	$129\frac{1}{2}$	50
,, ,, ,, (Deb. 4½%)	102	1,000
Gaboes ,, ,, ...	—	—
Holl. Rumeensche Petroleum Mij.	70	1,000
Int. Rum. Pet. Mij.	$18\frac{5}{16}$	500
Java Petroleum Mij. (Ord.)	—	1,000
,, ,, ,, (Pref.)	11	—
Koninklyke Nederl. Pet. Mij. Shares	324	100
,, ,, Share certificates	$322\frac{1}{2}$	1,000
Mœara Enim Petroleum Mij.	$150\frac{3}{8}$	100
,, ,, 1-1,000 Oblig. 5	—	250-1,000
"Moesi Ilir" Petroleum Mij.	—	—
Nederl.-Rumeensche Petroleum Mij.	$4\frac{5}{8}$	—
Nieuwe Ned. Petroleum Mij. And.	—	1,000
Oklahoma Petroleum Co.	$111\frac{1}{2}$	—
Oliebronnen in Hannover Mij.	82	—
Panolan Maatschappij Cert.	260	—
Perlak Petrol. Mij. (6% cum. pr. A.)	$135\frac{1}{2}$	1,000
,, ,, (Common)	—	—
Sumatra-Palembang Petroleum Mij	$119\frac{3}{4}$	500
Tarakan Petrol Mij.	$26\frac{7}{8}$	—
Zuid Perlak Petrol. Mij. (Pref.)..	139	—

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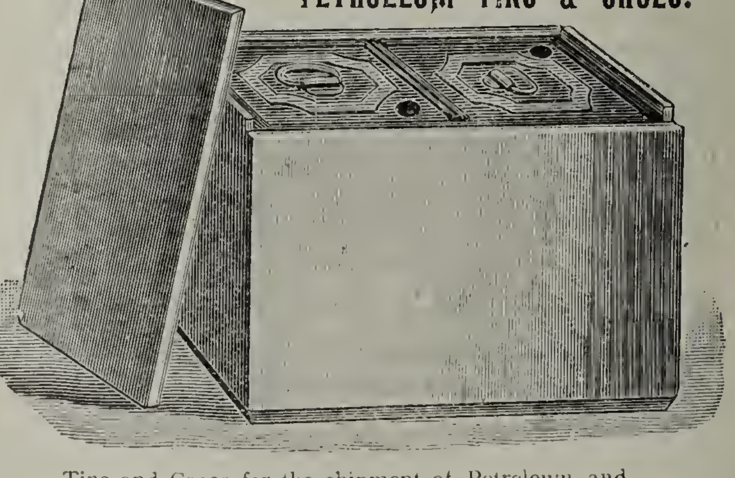

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THE
PETROLEUM REVIEW,
45, St. Mary Axe, London, E.C.
American Office: 150, Nassau Street, New York.

Saturday, January 30, 1909.

THE UNSUCCESSFUL ATTEMPT AT MONOPOLY IN THE BULK CARRYING TRADE.

The bulk oil-carrying trade may be truly said to have emerged from the crisis through which it has been passing for the last couple of years, and now when freights no longer stand at prohibitive rates, one can view the subject under all its varying circumstances carefully, and enquire how far the move on the part of those who attempted monopoly of the bulk oil carrying trade—for it was nothing else—has been successful. We have followed the crisis through its several stages; we have likewise taken a very keen interest in the attitude adopted by those concerns who sought, as it were, to strike a fatal blow at individual freedom and enterprise; and to us, and we feel we have every justification for saying so, the failure which has frustrated the attempts at monopoly, has been richly deserved.

The wonderful development during recent years of the bulk oil transport trade quickly brought into being an enormous fleet of oil tankers, which to-day we may reasonably assume to represent approximately 2,000,000 tonnage, and in this rapidly expanding branch of the industry, public carriers played an important *role*.

But some three or four years ago, free trade in bulk oil received its first set-back. The various distributing companies in the world's markets adopted a new policy of possessing their own transport facilities, and thus the free trade in bulk oil transport—that free trade which had given the transport question a speculative element—appeared to be almost doomed.

As our readers are aware, until this time the majority of the bulk oil carriers were owned by private enterprise, and in the ordinary way, boats for the carriage of oil were secured on charter, but when the large companies hit upon the plan of running their own tankers, a fictitious value was put upon oil tankers, and for the time being, the whole oil transport business was placed upon an abnormal and artificial basis. Distributing concerns determined to purchase their own fleets for the transport of at least the largest bulk of their petroleum products, and fall back upon the private oil tanker owner only when occasion demanded. Matters worked smoothly for a time, until the petroleum industry was commencing to feel the results of an extended use of its products, and then when additional transport facilities were required, the private owner was approached from several quarters at once for the chartering of his oil tanker, and it is small wonder then that freights soared up for a time to over 40s. per ton for bulk transport.

This abnormal state of affairs however, acted just the opposite to advantageous for the large importing companies, who by cornering the oil tankers, as it were, while their new boats were on the stocks, had to pay "through the nose" for any outside charters they felt obliged to take up.

But the blow which some of the importing firms endeavoured to strike at the public carrier was, after all, more of a two-edged sword than anything else. His experience in manipulating bulk oil carriers at a profit, even with low freights, told him that the time had arrived for him to make his position again secure, and so we see that last year approximately 30 per cent. of the 160,000 tons of new oil tankers built in this country were to the order of the public carrier. Week by week these boats are coming into charter—in fact, many of them have long ago been earning freights—and, as a consequence, the transport rates are now somewhere between thirteen and fourteen shillings per ton from American or Black Sea and English ports. After the high charges which have been in vogue for many months past, one may at first be inclined to look upon such freights as unremunerative. They undoubtedly are to the oil importing companies who have now their own large fleet of oil tankers, but we are assured on the point that the public bulk oil carrier is in no fear as to not being able to make both ends meet, with such freights ruling.

The positions of the two classes of oil tanker owners are quite different. The public carrier devotes all his energies to seeing that the capacity of his tanker is availed of to the fullest extent. He maps out her several journeys, and by the aid of his agents, he is in a position to see that not a single day proves unremunerative. No sooner has one cargo of oil been discharged at one port, than the tanker immediately sets out upon another errand, it may be to quite a different part of the world, yet it matters not, so long as time is not wasted. And so, being at the beck and call of everyone as he is, the public carrier gets far more out of his tanker than the oil importing company can ever hope to with its own fleet of boats. Ordinarily they ply between ports on the same route, and, inasmuch as the oil they carry is for that one importing company and no-one else, it is not difficult to see that they cannot possibly yield anything like the return at low freights, which a similar class of boats do to the public carrier. As a matter of fact, with the present freights ruling, it is an open secret—though our importing companies will be very loath to admit it—that the ocean transport part of their business is a losing factor.

As we contended months ago, the large oil importing firms were responsible for the bringing about of the high prices in tanker charters, and now they are the only sufferers by their unjustifiable policy in attempting to create a monopoly in the bulk oil carrying trade.

Personally, we have not the slightest doubt—and we emphasise the fact - that had the oil trade of Europe had had at its uninterrupted disposal the easy transport facilities of which it was possessed six or seven years ago, the trade would have developed in an even more remarkable manner than it has done recently, freed as it would have been from those circumstances which always bring an abnormal state of affairs in their train. The policy adopted by several prominent importing and distributing firms of owning and running their own fleet on oil carriers has already proved itself quite opposed to the principles of economy, and the result only confirms the opinion we put forward when the policy was first introduced.

THE "REVIEW" SHIPPING LIST.

Those of our readers who pay close attention to the Review shipping list will notice that we have decided in future to indicate the principal owners of the English oil tankers. We are aware that the shipping list as set forth to-day admits of improvement, but this will be made in succeeding issues, until we trust that eventually it may be possible for our readers to see at a glance the owners of every tanker whose whereabouts we chronicle.

THE HOMELIGHT OIL COMPANY, LIMITED.

STAFF DINNER AT MANCHESTER.

The fourth annual dinner and social evening of the Manchester branch of the Homelight Oil Co., Ltd., was held on Friday evening week, at the Mitre Hotel, Manchester, and from every point of view was eminently successful.

The chair was taken by the Company's Manchester manager—Mr. W. N. Bates—while the vice-chairs were filled by Alderman N. Ramsden of Bolton, and Mr. G. A. Dickin of Shrewsbury, there being noticed among the visitors Mr. A. Joynson representing the Manchester Ship Canal Co., Dr. Paul Dvorkovitz, London, and Mr. Mark Oliver of Manchester.

The arrangements for the evening's convivial function were in the hands of Messrs H. F. Lyman, J. Pritchard, E. Wilde and M. S. Thorley, and the comments of approval heard on every hand of the arrangements made for the comfort and enjoyment of every member of the party were in themselves unmistakable evidence of the ungrudging work put into the affair by the stewards.

After the loyal toasts had been musically honoured, Dr. Dvorkovitz made fitting reference to the loss of Mr. J. B. McClurg, the Homelight Co.'s late general manager, who was present at their last year's dinner along with the speaker as one of the guests. He was sure they would all agree that in their deceased friend they had had a gentleman whose sterling qualities had gained for him that high name among men, the memory of which would die hard. But it was a case of, "The King is dead: long live the King," for while they deeply deplored the removal of their kind and honoured chief, they also welcomed as the new general manager, their former colleague in Manchester—Mr. G. H. Watson—a gentleman who, the speaker was sure, would uphold those high traditions which had always been associated with the management of the Homelight Oil Co.

The Chairman then submitted the toast of the evening—"The Homelight Oil Company,"—and in doing so, associated with the toast the name of Mr. G. H. Watson. Mr. Bates spoke of the friendship which had always existed between the company's head offices and its branches — a spirit which had happily permeated the members of every branch staff. The result, he was pleased to say, was of the greatest possible benefit to all concerned, and did much to urge the respective staffs on to greater efforts in the future in making "Homelight" oil a real household word.

In his brief and pointed reply, Mr. Watson expressed his great pleasure at being invited to join his colleagues once again in Manchester, and said he hoped that the Manchester staff and agents would display that same loyal devotion to his successor—Mr. Bates—as they had shewn to him during his many years' stay among them.

Mr. Watson then proposed the toast of the "Branch Staff," dwelling upon the comradeship which its members had shewn one to another. The reply rested with Messrs. W. A. Chapman, F. J. Baylis and J. Wilson, the latter gentleman especially dwelling upon the necessity for their fostering that friendly spirit in all their dealings. Such a spirit of comradeship among them was bound to lift the petroleum distributing industry to a higher level, and do a great amount of good in preventing that unnecessary competition which was ruinous to all and beneficial to none.

Among the other toasts which were honoured during the evening were those of the "Company's Agents," responded to by Alderman Ramsden, Councillor S. Walker and Mr. G. A. Dickin; "Other Branches," proposed by Mr. W. A. Chapman and replied to by Mr. G. A. Cartall; the "Visitors," submitted by the Chairman and acknowledged by Dr. Dvorkovitz and Mr. A. Joynson. Mr. Joynson explained that though it was only fifteen years ago since Dr. Dvorkovitz selected the site for the first oil storage tank on the banks of the Ship Canal, no less than 1,250,000 tons of petroleum products had been imported into Manchester, and these cargoes had paid over £170,000 in port dues. The port of Manchester to-day stood only second to London in the quantity of petroleum products it imported, and to reach that position the Manchester Ship Canal had done much.

The evening's enjoyment was considerably enhanced by the rendering of a most interesting programme of songs and recitations by members of the "Homelight" staff.

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MANCHESTER AND THE CREOSOTE OIL INDUSTRY.

An interesting feature in the trade of the Manchester Ship Canal during the past week was the steamer "Pectan," one of the largest oil tankers afloat, which was berthed at Mode Wheel Wharf to load a cargo of creosote oil in bulk for America. The "Pectan" had a gross register of 7,291 tons, and net register of 4,752 tons. She is specially built for carrying petroleum in bulk and is also fitted for liquid fuel.

The growth of the creosote industry, so far as Manchester is concerned, forms another instance of the numerous new trades established in the city and district since the opening of the Manchester Ship Canal. The facilities offered by the canal for economising the cost of transit have had the result of bringing to Manchester many industries which would not have been centred there had the canal not provided the means of direct shipment to foreign ports.

Undoubtedly without the Ship Canal, Trafford Park would have retained to this day all its sylvan beauties instead of having become one vast hive of works and industries, which add materially to the wealth and prosperity of the city.

The oil trade, as readers of the Review are aware, stands out prominently in the Ship Canal trade statistics.

Along the banks of the canal, immediately below the Manchester Docks, there are no less than 30 large tanks, with a total storage capacity of 79,000 tons, or 22,000,000 gallons, for the storage of oil, and although Manchester is one of the youngest ports in the United Kingom, the quantity of oil imported exceeds the imports at any other port excepting London.

One of the kindred industries in connection with the oil trade is the manufacture of creosote oil, and although this industry has only been established in Manchester to any great extent within the last few years, the port is rapidly becoming one of the principal centres for the manufacture and concentration of creosote. The quantity now exported from Manchester compares favourably with the exports from the works established for many years on the banks of the Thames, Clyde, and Humber.

America is one of the principal markets for creosote oil, and large shipments are regularly being made from Manchester to New Orleans and Galveston. Formerly the traffic was shipped in barrels or drums, but it is now found more economical to ship by tank steamers.

Extensive manufacturing works are situated on the banks of the canal, just below the Manchester Docks, and the proprietor, Mr. J. E. C. Lord, distils large quantities of creosote oil from tar obtained from various corporations and gas works in the district, also from interior points.

The works have direct connection with the principal railway systems, and also with a deep water wharf on the Ship Canal. The tank steamers proceed alongside this wharf, and the creosote is quickly pumped from the works into the steamer's tanks.

We would congratulate Mr. Lord upon his enterprise, for it is only fifteen years ago that he consulted Dr. Dvorkovitz preparatory to engaging in this now important branch of Manchester commerce.

LAUNCH OF SS. "DANUBIAN."

Messrs. Swan, Hunter and Wigham Richardson, Ltd., launched, on Thursday week, the above vessel, built to the order of Messrs. Lane and Macandrew, 26, Great St. Helens, London, for the carriage of petroleum in bulk. The "Danubian," which has been supervised during construction by Messrs. Flannery, Baggallay and Johnson, of London, Liverpool and Rotterdam, is of the following dimensions:—339 feet 6 inches overall by 51 feet 6 inches by 30 feet 3 inches, and is to carry 7,100 tons of petroleum, is being built to the highest class at Lloyd's, and also to fulfil the Suez Canal regulations for petroleum ships. The machinery is of the triple expansion type by the Wallsend Slipway and Engineering Co., Ltd., and has cylinders 27 inches by 45 inches by 74 inches by 48-inch stroke, taking steam from three large single-ended boilers, at a working pressure of 180 lbs. A very complete installation of cargo pumping gear has been fitted, and the vessel is supplied with steam heating and electric light throughout. The vessel was gracefully named "Danubian," by Mrs. Frank Morris, as she left the ways.

DETAILS OF BAKU PRODUCTION DURING OCTOBER, 1908.

The following are the details of the production of crude oil at the Baku oil fields during October, as published in the latest issue of the *Neftiannoie Dielo* (in poods): -

	Number of Wells in Exploitation.	Production (in poods). By Baling.	By Spouters.	Casual.	Total.	Average per Well per Day
Balakhany	717	5,829,770	—	482	5,830,252	272
Saboontchi	769	17,411,516	—	330,390	17,741,906	774
Ramany	205	6,805,945	233,530	13,540	7,053,015	1,186
Bebe-Aibat	248	8,991,051	420,327	11,087	9,422,465	1,324
Total in October, 1908	1,939	39,038,282	653,857	355,499	40,047,638	697
Total in September, 1908	1,922	36,796,818	178,985	346,719	37,322,522	674
Total in October, 1907	1,804	39,299,313	244,106	397,498	39,940,911	765

The production by spouting was obtained from the following wells: –

			Poods.
At Ramany	On Assadulaeff's Plot No. 107	From Well No. 33	233,530
,, Bebe-Aibat	,, Zoubaloff's Group XX.	,, ,, ,, 32	190,000
,, ,, ...	,, Nobel's Plot No. 27	,, ,, ,, 25	230,327

In addition to the above, there were produced at Surakhany in October, 21,549 poods of white crude oil, 27,100 poods of black crude oil and a quantity of natural gas, equivalent to 438,678 poods.

THE ANNUAL MEETING OF THE "OLEX" COMPANY.

The annual meeting of the "Olex" Co., the full name of which is Actiengesellschaft fuer Oesterreichische und Ungarische Mineraloelprodukte, which is the joint export organisation of the Austro-Hungarian petroleum refiners, was held recently in Vienna, when the report and accounts for the financial year ended 30th April, 1908, were adopted.

In their report, the directors stated that the contracts for the sale of oil on commission, on which the company's business was based since its foundation, expired on the 30th of April, 1907, and the company entered into a provisional arrangement with the refiners, by which the company purchases for its account certain quantities of oil for export purposes.

The financial results would probably have been more favourable were it not for the unsatisfactory conditions of transport which prevailed during the winter of 1907-8 on the Austrian railways, in consequence of the passive resistance of the railway employés, which increased the cost of transport. In the beginning of the financial year, the company was compelled to restrict its export operations, owing to the excessively high prices which the Galician crude oil producers were at that time demanding for their oil, some of them even declining altogether to sell any considerable quantities of crude oil to the refineries. And notwithstanding their desire to maintain and extend their business abroad, which was established after a severe struggle against powerful competitors, the directors were for many months compelled to decline orders for considerable quantities. At the same time, the directors point out that from a quantitative point of view, the sales for the past financial year were very gratifying. They have succeeded in selling considerable quantities of their oil to railways and Government departments in Germany, Belgium and other European countries, for which they have much to thank the Austro-Hungarian diplomatic and consular representatives abroad.

During the year the company created two subsidiary concerns: the Bayerisch-Oesterreichische Petroleum Gesellschaft m.b.h. at Nurnberg, the Deutsch-Oesterreichische Petroleum Gesellschaft m.b.h. in Hamburg, and the Petroleum Import Maatschappij in Zaandam, Holland. From the operations of these companies the directors expect the same satisfactory results as they have already obtained from those previously established in Breslau, Dresden, Dusseldorf, and Frankfort-on-Maine. The sphere of operations of each of these concerns has during the past year been much enlarged by the establishment of new distributing depôts. The company has in the meantime erected several new tank installations in Germany, and is now engaged in the construction of a large installation in Antwerp and continues its efforts to build up a selling organisation capable of working without intermission.

The amount invested by the company in its subsidiary concerns stood on the 30th April, 1908, at 1,812,629 kronen.

Favourable results are expected from the operations of the current financial year, as so far sales have been 50 per cent. higher than in the corresponding period of the past year, in spite of the competition being more severe than ever.

For the purpose of enlarging the company's existing tank installations and building new ones, and for equipping the company's distributing organisation, the directors have obtained the sanction of the meeting to an increase of capital from 2,300,000 to 3,000,000 kronen, the new issue being taken up entirely by the existing shareholders.

The company is carrying on the sale on commission of gas oil, and in this respect they state that they have as buyers some of the largest municipalities in Germany.

The year ended with a profit balance of 8,179·20 kronen, of which 3,500 kronen is put to the reserve fund, and balance carried forward.

The directors have waived their right for any remuneration for the past year.

The balance sheet includes the following principal assets:—Central installation, 450,736 kronen (original cost, 450,736 kronen); investments in subsidiary concerns abroad, 1,306,886 kronen; debtors, 2,184,938 kronen; and stocks of goods, 495,646 kronen. The liabilities include—Share capital, 1,000,000 kronen; payments on account of proposed new issue, 1,300,000 kronen; creditors, 1,929,708 kronen; and debt to treasury for taxes, 309 041 kronen.

The gross profit on sales for the year amounted to 533,642 kronen; against this there were general expenses, 450,693 kronen; taxes, 11,011 kronen; and depreciation, 71,566 kronen.

The board of the company consists of:—President, Mr. Robert Biedermann Freiherr von Turony; vice-presidents, Messrs. Oskar von Szirmai and David Fanto; the other directors are: Messrs. Otto Brunner, Dr. Heinrich Feuerstein, Ignaz Gartenberg, Carl Gottstein, Julius Priester, Gustav Reichel, Dr. Sigmund Stransky, Julius Weiss and Wilhelm Wollner.

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AMERICAN PARAFFIN WAX EXPORTS DURING NOVEMBER.

The exports of paraffin wax from America during November are given in the following table, and for comparison the figures for the corresponding month of 1907 are also published, the amounts being in pounds:—

Exported to—	1907.	1908.
United Kingdom..	9,266,321	4,917,109
Belgium	74,875	28,578
France		15,592
Germany	506,968	1,082,400
Italy	816,723	527,719
Netherlands	220,370	489,638
Other European Countries ..	470,724	673,759
Central American States and British Honduras	103,080	125,874
Mexico	517,547	948,062
South America	50,260	72,749
Japan	2,635,819	—
British Australasia	—	289,999
Other Asia and Oceanica ..	338,086	1,399,770
British Africa	232,053	185,551
All Other African Countries ..	1,043,527	654,609
Other Countries	4,038	6,514

MEXICAN OIL FOR JAPAN.

According to a special report published in the latest issue of our contemporary, the *Oil, Paint and Drug Reporter*, arrangements are now being made for the exportation of large quantities of Mexican crude oil to Japan. The Kokuyu Kyodo Hanbalsho Oil Co. which has erected a very up-to-date refinery in Yokohama at a cost of $3,000,000, finding that the home supply of crude oil is quite insufficient for its needs, has turned to Mexico as the source for a large part of its refinery needs. The company's managing director recently arrived in Mexico for the purpose of arranging contracts for at least 2,000,000 barrels annually, and it is now understood that the oil will be supplied jointly by Messrs. S. Pearson and Son, Ltd., and the Mexican Petroleum Company. The Mexican oil will be shipped to Japan via the port of Salina Cruz.

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PRODUCTION OF THE BATAAFSCHE PETROLEUM MAATSCHAPPIJ.

The production of crude oil by the Bataafsche Petroleum Maatschappij, in which are amalgamated the producing properties of the Royal Dutch Co. and the Shell Co. in Sumatra and Borneo, in 1908 amounted to 1,111,691 tons, as against 1,063,343 tons produced in 1907.

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SIR WEETMAN PEARSON VISITS MEXICO.

The REVIEW learns from official sources that Sir Weetman Pearson, the head of the well-known firm of Messrs. S. Pearson and Son Ltd., of Westminster, left this country last week upon an extended visit to the company's oil fields in Mexico. Sir Weetman, who was accompanied by his son, travelled via New York, and intends to return to England either in March or April.

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YOKOHAMA PETROLEUM IMPORTS.

The imports of petroleum and its allied products into Yokohama during November amounted to 431,918 gallons, and were valued at 86,384 yen, as compared with a total importation of 1,217,260 gallons for November 1907 valued at 333,651 yen. The total petroleum imports for the eleven months amounted to 18,753,884 gallons.

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BATOUM PETROLEUM SHIPMENTS.

The following were the shipments of petroleum products from Batoum during the week ended December 20th, o.s. (in poods) :—

	Illuminating Oil.		Other Products.	
	1907.	1908.	1907.	1908.
To Europe ..	—	—	144,000	3,000
To the East ..	260,000	1,000	—	1,000
To Russian Ports.	109,000	108,000	—	—
From 1st Jan. to 20th Dec. :—				
To Europe ..	14,119,000	15,654,000	9,516,000	9,334,000
,, the East ..	11,729,000	9,265,000	358,000	189,000
,, Russian Ports.	2,280,000	3,492,000	196,000	126,000

The shipments of residuals to Europe from January 1st to 20th December (o.s.) amounted to 185,000 poods in 1907 and 2,093,000 poods in 1908.

AMERICAN NOTES.

The Union and the Standard.—The statement to which publicity has been given to the Standard having aquired a large interest in the Union Oil Co. of California is contradicted by the officials of the latter company.

Gulf Shipments of Refined Products.—The total shipments of refined products from both Port Arthur and Sabine during December amounted to 530,858 barrels, over 320,000 barrels of which were shipped during the latter half of the month.

In Kentucky.—A gratifying feature of the operations in Kentucky has been the strike of a producer daily giving out a production running into three figures. This well is considerably in advance of the proven territory in the Parmleysville district of Wayne country. This is the second completion in the district, the first shewing only a slight production.

A Colorado Success.—One of the largest oil wells ever brought in in the Boulder field, Colorado, has been recently completed by the Inland Oil Co. It spouted for a long time before it could be brought under control, and now is reported to be doing 200 barrels daily. All the other wells in the field are light pumpers, the spouting element having hitherto been quite absent.

In Nevada.—A report from Tonopah, Nevada, stated that renewed interest is now being taken in Indian Springs, a spot which was the scene of considerable excitement three years ago, when there much talk of its being a prospective oil field. Active drilling is shortly to commence, one of the principal concerns being the Western Core Drilling Co, which has secured nearly 700 acres in the centre of the district.

The Santa Maria Field.—For the benefit of our English readers, some of whom have interests in the Santa Maria field, our correspondent at Los Angeles writes that the outlook was never more favourable than at the present time. The demand for oil is good and prices have an upward tendency. Between twenty and thirty wells are now being sunk, and so there is every reason to believe that the output of the field will increase very materially during the year, for the eastern end of the field, where drilling is not so slow, is being opened up.

An Important Oil Strike.—A strike of considerable importance has just been made in the Fullerton field of California by the Fullerton Oil Co. It was about to abandon its No. 1 well near Brea Canyon, for drilling has reached 3,000 feet, while the nearest well was producing from 2 100 feet, when at this great depth there was increasing gas pressure, and so drilling was continued to 3,300 feet. The well then came in, and began to flow at the rate of 3,000 barrels per day. This fact seems to prove the existence of a deep and very rich sand in the Fullerton field which has in the past been untapped.

The Mid-Continent Fields during 1908.—The Mid-Continental fields will, both as regards production and operations for the year 1908, shew a decline when the figures are compared with those of the preceding year, but nevertheless the showing will be creditable. As is well known, operations have been considerably curtailed owing to the accumulation of stocks on the territory and the lack of transportation facilities, and it is estimated that the wells drilled during the twelve months will be about one thousand less than in 1907. Matters, however, give promise of great improvement, with the announcement that the Prairie Co. is now pushing forward its new pipe line to the Gulf of Mexico from the Oklahoma fields.

December Pipe Line Report.—Conditions were reversed in the Eastern oil fields during December from those of November, and the pipe lines shewed an increase in the receipts and a decline in the deliveries. The runs were the largest since September, while the shipments were about 2,500 barrels below the November report. The gross stocks in the custody of the Eastern pipe lines, which cover all grades of oil, made a gain of nearly 8,000 barrels a day. The stocks of Pennslvania oil were increased 154,356 barrels during the month, while the Lima stocks gained 7,667 barrels. There was a decline in the receipts from wells during November, accompanied by a heavy gain in the shipments. At the same time there was a small gain in the gross stocks. The increase was less than 650 barrels a day. The stocks of Pennsylvania oil declined 156,477 barrels, while the Lima stocks made a gain of 130,890 barrels. Over 52 per cent. of the stocks held by the Eastern lines is composed of oil from the Illinois and Mid-Continent field.

THE OIL AND GAS FIELDS OF OKLAHOMA.

By Mr. **CHAS. N. GOULD**, of the Oklahoma Geological Survey.

In the special New Year's issue of the *Manufacturers' Record*, Mr. Charles N. Gould, Director of the Oklahoma Geological Survey, with whose contributions to oil-field literature our readers are already familiar, writes a very interesting article upon the oil and gas deposits of Oklahoma. The article is very concise, and so full of information that we herewith take the liberty of reproducing it fully.

The Oklahoma oil field as already developed is scattered over an area of 6,000 square miles, located in the north-eastern part of the State. Its eastern and southern limits may be quite sharply defined. The eastern limit is not far from the Grand River, and the southern limit will not extend beyond the Choctaw fault, which runs from the Arkansas line west and south-west as far as Atoka. The western limit of the future field is more difficult to determine, but will probably lie not far from the western line of the old Creek Nation.

The first drilling in the Mid-Continent field, of which the Oklahoma field forms a part, was done in Kansas a number of years ago. Both oil and gas having been found in quantities just north of the Oklahoma line, several drillers ventured southward into what was at that time Indian Territory. The first wells were drilled near Chelsea and Bartlesville. With this small beginning the the development spread south and east until at the present time it has in a few instances reached the Canadian River. There is little doubt that future drilling will shew the presence of oil as far south as McAlester or even Coalgate, and it seems quite certain that the Oklahoma field will connect up with the Arkansas gas fields near Fort Smith and Manfield.

The greater part of the oil and gas so far found in Oklahoma occurs in six general regions, namely, the Muskogee field, in and near the city of Muskogee; the Ninety-sixth Meridian field, which extends from the north line of the State to the Glenn Pool; the Coody's Bluff-Alluwe field, usually known as the Shallow field, in Nowata and Rogers counties; the Cleveland field, in a bend of the Arkansas River, in Eastern Pawnee county; the Hogshooter field, along Hogshooter Creek, in Eastern Washington county, and the Bald Hill-Morris field east and north-east of Okmulgee.

The first development in the Muskogee field was in 1894, when two wells were drilled within the present city limits. In 1904 some 30 new wells were brought in, with a total production of 1,000 barrels per day. However, it was not until the winter of 1906-1907 that anything like extensive operations were carried on. At that time a strong well of high-grade oil was brought in a few miles south-west of the town. Since then more than 100 producing wells have been drilled, and new wells are constantly being brought in.

Probably more than two-thirds of all the oil produced in the State has been found along the line of the Ninety-sixth Meridian, which was the dividing line between the Cherokee and Osage Nations. Wells drilled a few miles east or west of this meridian have almost invariably found large quantities of oil or gas. In Kansas the wells at Caney and Peru are located near this line. The most prominent fields along the Ninety-sixth Meridian are those near Copan, Bartlesville, Dewey, Skiatook, Tulsa, Redfork and the now famous Glenn Pool. In 1901 there were five producing wells just beyond the Osage reservation line west of Bartlesville. In 1902 oil and gas were discovered at Redfork south of Tulsa. Since 1905 there has been a row of wells down the meridian line from the Kansas line to Beggs.

The first producing wells of the Coody's Bluff-Alluwe field were brought in a few miles west of Chelsea eight years ago. The producing area in this region lay to the northward, and at the present time the field covers a region six to ten miles wide and about 25 miles long. The depth to oil sand in this field is variable, ranging from 150 feet in some places west of Chelsea to nearly 600 feet at the northern end.

Another productive region is at Cleveland, some 25 miles west of the Ninety-sixth Meridian. This field is small, occupying not more than half-a-dozen sections, but it has produced a large amount of oil. However, it seems to have passed its prime, for a number of once good producing wells have quit flowing. Judging from geological conditions, it is believed that a new and larger field will be discovered south-west of the old one at Cleveland.

In Eastern Washington county, along Hogshooter Creek, some splendid flows of gas have been encountered. In 1907 a well said to produce 60,000,000 cubic feet per day was brought in.

In 1905 a well was brought in about six miles east of Okmulgee. This was followed by others, until at the present time there are more than 50 wells producing either oil or gas in paying quantities. This region has developed into what is known as the Bald Hill-Morris field, and is destined to become a prolific field.

Besides the areas mentioned, there are a number of localities where small quantities of oil and gas have been found. Successful wells have been drilled at various places in Osage county west of the Ninety-sixth Meridian, At Wheeler, about 20 miles north-west of Ardmore, in the southern part of the State, a number of wells producing heavy-fuel oil in paying quantities have been brought in. Both oil and gas in small quantities have been found at Gotebo and Lawton, near the Wichita Mountains, and a small quantity has been found at Granite, at the western extremity of the same range. Dry gas sufficient for local use is found at Blackwell, Ponca City, Coweta, Chelsea and Bristow. Coweta also produces some oil, and light producing wells have been brought in near Wewoka, Madill and Manford.

The depth to the oil sand varies in different localities. In the Coody's Bluff-Alluwe field east of the Verdigris River the average depth is about 600 feet. Farther west, near Bartlesville, wells are 1,000 to 1,200 feet deep. Near

Tulsa, and in the Glenn pool, the greater part of the oil and gas is found at a depth of 1,500 to 1,700 feet. At Cleveland the oil is found in a higher sand than at Bartlesville or Tulsa, but the depth is approximately the same as in these localities.

In 1907 Oklahoma ranked first in production of oil among the States of the Union, 44,300,149 barrels, worth $17,750,000, having been produced in that year,

The oil in this region is found in rocks of carboniferous age. In the Kansas fields it occurs in the Cherokee shales, a formation 450 feet thick, which lie at the base of the coal measures, and just above a heavy limestone of Mississippian age known as the Boone chert. This rock is known to the driller as the Mississippi lime, and as far as known neither oil nor gas in quantity has been found beneath it. Farther south in Oklahoma the Cherokee shales thicken, but here also the oil and gas are found in this same general horizon.

There is no connection whatever between the oil and gas in the Mid-Continent field and that found at Corsicana and Beaumont, Texas. The Corsicana oil comes from the upper cretaceous rocks, and the Beaumont is from the tertiary deposits, still younger formations. The only oil in the central part of the United States which is of the same age as that in the Mid-Continent field is found at Henryetta, Texas, where the deposits are found at about the same level as in the Mid-Continent field.

In the light of present knowledge it seems probable that the Oklahoma gas field is the most extensive so far discovered in the United States. There is absolutely no way of estimating the amount of gas so far discovered in the field. Gas has been found in practically all the oil fields above mentioned. In many cases wells produce anywhere from 10,000,000 to 20,000,000 cubic feet per day, and a number of wells are reported to yield all the way to 50,000,000 and 60,000,000 cubic feet.

There has been very little market for gas, and perhaps not 10 per cent. of the region known to be productive has been drilled, and certainly not 10 per cent. of the future productive regions have yet been prospected. So that at a conservative estimate, not 1 per cent. of the available gas has been touched.

There is not a city or hamlet in the oil region that does not have gas within a few miles ample for all needs. In a number of instances gas is sold for manufacturing purposes at two cents and three cents per thousand cubic feet, and the conditions of the field justify the prediction that the price need not be advanced for many years to come.

The Oklahoma Natural Gas Co. is now delivering gas to Oklahoma City, 100 miles from the field, and to points between that city and the field, at 25 cents per thousand cubic feet for domestic use. The company is preparing their lines to Chickasha, Lawton, El Reno, Kingfisher, Enid, Perry, Pawnee, Stillwater, Guthrie and intermediate points. This company claims to control a supply sufficient to last 10 years.

Most of the oil and gas is sold to the Prairie Oil and Gas Co., a subsidiary of the Standard Oil Co., and the Gulf and Texas companies, only a small per cent. going to independent companies. During the year 1907 two pipe lines were completed from the Gulf Coast to the Glenn pool, in the southern end of the Ninety-sixth Meridian field, and a number of large storage tanks were erected. One line leads north-east to the Atlantic coast. The completion of these lines gave considerable relief to market conditions, but transportation facilities have not kept pace with increased production.

It is believed by those who have been over the field carefully that the Oklahoma oil field is only in its infancy, and that it will continue for many years to be the most prolific field in the United States.

In addition to the vast amount of oil and gas, Eastern Oklahoma contains anywhere from 6,000,000,000 to 10,000,000,000 tons of a high-grade bituminous coal. Much of it is good coking coal. Thus it be seen that the fuel problem is solved for Oklahoma.

Raw material for a great variety of products is found in abundance in the oil and gas fields. Clay of various kinds for the manufacture of brick, tile, hollow-ware, terra-cotta, pottery and fire-clay is abundant throughout the region. Limestone suitable for burning into lime or for the manufacture of Portland cement is widely distributed. Glass sand is abundant at no great distance. The lead and zinc fields are near at hand, and the largest gypsum deposits in the United States are not far away. There is an abundance of hardwood timber and plenty of building stone. All of these raw materials, combined with the inexhaustible deposits of all kinds of fuel, render this an attractive region for permanent investment.

THE TEXAS COMPANY,
Transporters, Refiners and Distributors of Petroleum and its Products

CRUDE BENZINE & DEODORISED BENZINE.

FUEL OIL AND GAS OIL
A Specialty.

LUBRICATING OILS.
HIGHEST GRADES. UNIFORM QUALITY.

"TEXACO" BITUMEN.
Over 99 % Pure Bitumen.

BAKU PRODUCTION DURING DECEMBER.

The total production of crude oil at the Baku oil fields during the month of December (o.s.) amounted to 39,061,000 poods.

The production of the leading firms operating in the Baku oil fields in December was :—

	Poods.
Nobel Bros.	5,400,000
Caspian and Black Sea Society	2,900,000
Mantascheff and Co.	2,300,000
Baku Naphtha Co.	2,200,000
Caspian Society..	2,100,000
Mirzoeff Bros.	1,300,000
Moscow-Caucasian Co.	1,200,000
Pitoeff and Co.	1,100,000
Russian Naphtha Co.	900,000
Neft Co.	900,000
Aramazd Co.	900,000
Bibi-Eybat Petroleum Co., Ltd.	900,000
Russian Petroleum and Liquid Fuel Co., Ltd.	900,000
Nagieff	800,000
European Petroleum Co., Ltd.	700,000
Kavkaz Co.	600,000
Baku Russian Petroleum Co., Ltd.	600,000
Melikoff and Co.	600,000
Zoubaloff	600,000
Schibaieff Petroleum Co., Ltd.	600,000
Ter-Akopoff Co.	500,000
Assadulaeff	500,000
Shikhovo Co.	500,000
Benkendorf and Co.	500,000

PETROLEUM IN RUSSIAN SAKHALIN.

In the latest issue of the Bulletins of the Russian Geographical Society a report is published of the results of the inspection carried out by Mr. E. E. Anert, by instructions from the Geological Committee, of the east coast of the Northern or Russian half of the island of Sakhalin.

In addition to the previously known petroleum deposits, the expedition discovered in Sakhalin a series of new deposits. According to Mr. Anert they encountered numerous surface outcrops of petroleum, lakes and large surface areas covered with oil, which, in his opinion, lend such importance to the Sakhalin petroleum deposits that it would be unpardonable not to carry out thorough and systematic explorations. He admits that the borings hitherto carried out in Sakhalin have not yielded any favourable results and the oil strata encountered were not considered sufficiently rich to justify exploitation. These wells were, however, sunk to comparatively slight depths, and the results shewn by them do not preclude the possibility of finding oil in paying quantities by drilling to greater depths. Moreover, the oil belt in Sakhalin extends over a length of some 200 miles, and the results of a few wells sunk at one or two spots cannot be accepted as a guide to the value of the whole territory.

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The Uchta Oil Region.—A fresh expedition will this year be dispatched by the Russian Government into the Uchta oil region. This expedition will be under the leadership of an engineer named N. V. Popoff, and its main object is to solve on the spot the question of the means for delivering Uchta oil to the industrial centres of Russia. The Ministry of Agriculture has also proposed the investigation of the question of colonising that region with emigrants from Central Russia.

THE INDIAN PETROLEUM MARKET.

(Crowded out of page 81.)

BOMBAY, Jan. 9TH.

The market is strong. The following are the current prices of the Standard Oil Co. of New York :—

		Rs.	a.	p.
Snowflake Brand, 150 deg., American	(per case)	6	4	2
White Rose, 150 deg. ,,	,,	6	4	2
Chester Brand, 76 deg. Abel	,,	4	12	2
Devoe's Brilliant	,,	4	12	2
Monkey Brand, 76 deg. Abel	,,	4	6	2
Elephant Brand, 125 deg. (bulk in tins)	(per 2 tins)	3	15	0
Elephant Brand, 125 deg. (bulk without tins) (per 8 Imperial gallons)	..	3	5	0

The following are the current prices of the Asiatic Petroleum Co., Ltd. :—

		Rs.	a.	p.
Swan Brand, bulk loose..	(per unit)	2	15	0
Swan Brand, new tins	(per pair)	3	9	0
Ship Brand, bulk loose	(per unit)	3	5	0
Ship Brand, new tins	(per pair)	3	15	0
Rising Sun Brand, bulk loose	,,	3	7	0
Rising Sun Brand, new tins	,,	4	1	0
Anchor Cases	(per case)	4	6	0
Silver Light 150 deg. cases, ...	(per case)	5	4	0

The prices of the Burma Oil Co.'s productions are as under :—

		Rs.	a.	p.
Kerosene, Victoria	(per 2 tins)	3	8	0
Kerosene, Victoria	(per 8 gallons)	2	14	0
Kerosene, Chukker	(per 2 tins)	3	15	0
Kerosene, Chukker	(per 8 gallons)	3	5	0
Burmah Wax	(per pound)	0	4	0
Burmah Candles	,,	0	5	6

THE TIN PLATE MARKET.

Messrs. Norton, Owen & Co., of 4, Bishopsgate Street Within, London, E.C., report under date January 28th, 1909, as follows :—

Owing to the continued slump in the ingot tin market, the difficulty of obtaining specifications from buyers against contracts for tin plates (in consequence of which some makers have considerable quantities of plates to offer for prompt delivery), and to the depression at present prevailing, prices of tin plates are easier and we make oil sizes to-day as under :—

IC	18¾ × 14	124 sheets	110 lbs.	11/9 to 11/10½ per box.
IC	19¼ × 14	120 ,,	110 ,,	11/9 ,, 11/10½ ,,
IC	20 × 10	225 ,,	156 ,,	16/9 ,, 17/0 ,,

F.o.b. Wales. Tin lining and iron hooping extra.

THE ANGLO-MEXICAN OILFIELDS, LIMITED.

The manager reports by cable as follows :—Borehole No. 1, the depth is 1,699 feet, being an increase of 29 feet during the week. The formation is hard grey shalerock. Borehole No. 2, the depth is 2,601 feet, being an increase of 62 feet during the week.

THE COMMONWEALTH OIL CORPORATION, LIMITED.

In the last issue of the REVIEW, our readers will recollect that we published a specially written and an illustrated article upon the developments made on the properties of the Commonwealth Oil Corporation, Ltd. We regret that an error crept into that article, inasmuch as we stated that the capacity of the refineries at Hartley Vale were to be increased from 15,000,000 gallons to 25,000,000 gallons daily. We need scarcely state that the figures should have read 15,000 and 25,000 respectively.

The Production of the Russian Fields during 1908.

OUTPUT OF THE PRINCIPAL FIRMS.

From the statistics to hand regarding the total production of the Baku oil fields during the past year, it would appear that the total yield of crude oil for the twelve months was approximately 416,000,000 poods—a figure over 30,000,000 poods below that of 1906, and no less than 60,000,000 poods below the output of the preceding year. The exact figures for the twelve months' working are 416,208,788 poods, or 6,800,000 tons, and thus, when the total production of Grosny is added, the total figures for Russia will come very close to the estimate as published in the last issue of the REVIEW of 7,500,000 tons.

The progress of the production in the Baku fields month by month during the past year was as follows:—

	Poods.		Poods.
January	39,700,000	July	39,500,000
February ..	36.500,000	August ..	39,600,000
March ..	39,600,000	September ..	37,300,000
April	38,700,000	October ..	40,000,000
May	39,900,000	November ..	38,500,000
June	37,800,000	December ..	39,100,000

The total Baku crude oil production for the year compares with the output for the preceding two years as under:—

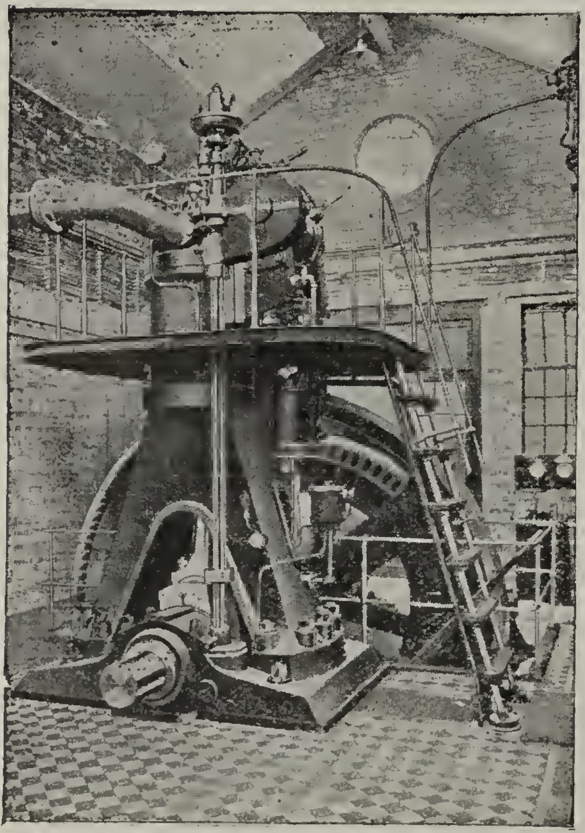
	Poods.
1906	448,959,133
1907	476,271,313
1908	416,208,788

The production of the leading Baku firms in 1908, as compared with the figures of 1907, is given in the following table. It will be noticed that all the firms have suffered from decreased production with but one or two exceptions. The firm whose production fell to the greatest extent was the Baku Russian Petroleum Co., Ltd., where a decrease of nearly 5,000,000 poods has to be recorded.

	1908. Poods.	1907. Poods.
Nobel Bros.	63,376,865	64,692,000
Caspian and Black Sea Society ..	34,236,638	36,394,000
Caspian Society	24,655,882	22,579,000
Mantascheff and Co.	25,021,575	25,290,000
Baku Naphtha Co	22,894,062	24.510,000
Pitoeff and Co.	13,834.400	13,744,000
Mirzoeff Bros.	13,419,041	15,066,000
Moscow-Caucasian Co.	13,031,935	13,035,000
Aramazd Co.	12,755,925	13,120,000
Nagieff..	12,142,197	9,772,000
Russian Petroleum and Liquid Fuel Co., Ltd.	11,265,176	10,491,000
Bibi-Eybat Petroleum Co., Ltd. ..	10,953,000	10,419,000
Zoubaloff	10,936,000	12,964,000
Schibaieff Petroleum Co., Ltd. ..	9,197,830	12,895,000
Baku Russian Petroleum Co., Ltd.	8,476,716	13,204,000
Russian Naphtha Co.	11,092,817	13,893,000
Neft Co.	8,148,000	8,490.000
Naftalan Co.	7,961,409	11,636,000
European Petroleum Co., Ltd. ..	7,174,300	7,119,000
Ter-Akopoff Co.	6,915,783	—
Shikhovo Co...	6,850,427	—
Kavkaz Co.	6,154,425	—
Melikoff and Co.	5,640,500	—
Assadulaeff	5,259,668	—

◆

A Rejected Proposal.—A conference was held at St. Petersburg recently under the auspices of the Tariff Committee of the Russian Railways to deal with the proposal made by Messrs. Elrich and Co., of Riga, that the railway rate for heavy solar oils on the Baku-Batoum line shall be raised. These heavy solar oils are used for the manufacture of vaseline oils, and Messrs. Elrich and Co. complain that owing to low freight from Baku to Batoum, foreign manufacturers of vaseline oil are placed in a more advantageous position than Messrs. Elrich's Riga works. The conference has, however, by an overwhelming majority declined the proposal and the rate will accordingly remain unchanged.



80 B.H.P. Diesel Engine coupled to Alternator.

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DIESEL ENGINE CO., LTD.,

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The American Oil Market.

New York, Week ended Jan. 16th.

Development work seems to have been generally stimulated in the Eastern fields contributing the higher grades of petroleum, winter conditions having exercised comparatively little setback as yet. The new production, while larger than that of last week, does not shew the gain that the increased number of completions would apparently warrant, a showing that may be attributed to the excess of dry holes for the week under review. West Virginia results are deserving of first consideration, the new production having been nearly doubled from a slightly larger number of successful wells. Ritchie and Roane counties furnished the best producers of the week; in the former, three of the six wells drilled yielded a total of 390 barrels daily, and in the latter, all of the five completions came in producers with an aggregate of 210 barrels. One of the Roane county wells marked an extention to defined limits. The same degree of activity characterised Lincoln county operations, says the *Oil, Paint and Drug Reporter*, but four of the week's completions were in the duster class and the new daily production did not exceed 135 barrels. The Holliday's Cove pool of Brooke county continues to yield fairly good results, considering the extent of drilling carried on for the last year and the production of this formation was lately given as 1,735 barrels a day. No recent figures have been reported on the Follansbee pool, this district apparantly being neglected. Returns for the week from the South-eastern Ohio fields are also of favourable significance, chiefly in consequence of the good showing credited to the Mingo development of Jefferson county. Six wells were drilled in this formation, of which number five produced a daily total of 660 barrels. Two of the best of the late completions were reported in advance of the proven area. Many of the older Mingo wells have been abandoned, while others have been put to pumping. The average production of the pool for the first ten days of the month was recorded as 855 barrels a day. About four months ago the capacity was 2,200 barrels. Dusters have continued the rule in Columbiana county in the same section and operators believe that the producing formations have already been well defined. Pennsylvania completions were slightly in excess of those previously reported, but nothing of particular interest was noted in the week's developments. The stocks of crude of the Pennsylvania classification held at the close of December amounted to 3,306,894 barrels, against 3,052,538 barrels at the end of the previous month. Prospects for successful exploration of the new field in Marion county near Centralia have been darkened by a number of dusters encountered during the last few days. The production of the Illinois fields for 1908 is placed at about 38,000,000 barrels, indicating a gain of nearly 14,000,000 barrels over the 1907 record. Statistics for Illinois for December shew runs of 2,512,705 barrels, deliveries of 252,607 barrels and stocks at the close of the month of 25,323,612 barrels, the last being the heaviest in the history of the State. Advices from the Mid-Continent field record a gain in the December runs of the principal operating company over those of the previous month, but a more than counterbalancing decline in the shipments. The possible production of the field at this time is placed at 177,000 barrels a day.

Refined and Products.—The export movement has constituted the principal activity of the week in the local market for refined, our record of clearances shewing a total of 14,582,920 gallons, against 5,954,160 gallons, noted previously. Of the former amount, 7,591,250 gallons were carried by the tank fleet. More interest has been occasioned in forward chartering, engagements reported during the week being 180,000 cases for Australia and a similar quantity for Taku Bar, both New York loading. No developments affecting values are to be noted and apparently the same measure of firmness is dominant.

CLOSING QUOTATIONS.

Crude at the Wells.

The quotations for oil represented by credit balances were :—

	Week ended Jan. 16. 1908.	Week ended Jan. 16. 1909.
Pennsylvania	$1·78	$1·78
Tiona	1·78	1·78
North Lima	0·94	1·04
South Lima	0·89	0·99
Indiana	0·89	0·99
Illinois, heavy, below 30 deg. ..	0·60	0 60
Kansas and Indian Ter., 32 deg. and above	0·41	0·41
Heavy	0·28	0·28
Humble, Tex.	0·75	0·53
Saratoga	0·73	0·53
Sour Lake, Tex.	0·77	0·53
Jennings, La.	0·72	0·55
Canadian Oil :—		
Petrolia	1·34	1·44
Oil Springs, less pipeage	1·41	1·51

Refined—For Export.

In cents.		Week ended Jan. 16. S.W. 110 test.	Week ended Jan. 16. W.W. 150 test.
Barrels, cargo	per gal.	8·50	@10·00
Philadelphia		8·45	@ 9·95
Bulk, New York		5·00	@ 6·50
Bulk, Philadelphia		4·95	@ 6·45
Cases, New York		10·90	@12·40
Cases Philadelphia		10 85	@12·35

Refined in Cases—110 Fire Test.

	Week ended Jan. 9. 1909.	Week ended Jan. 16. 1909
3,000 to 10,000	11·05	11·05
1,000 to 3,000	11·10	11·10

Refined—Jobbing Lots.

In barrels, pkgs. included.

		Week ended Jan. 9.	Week ended Jan. 16.
120 fire test, S.W. ..	in barrels	12	12
130 fire test, S.W.		12½	12½
150 fire test, W.W.		13½	13½
In bulk from tanks		10	10
300 fire test		13¼@14	13¼@14

Naphtha and Gasolene.

	Week ended Jan. 9	Week ended Jan. 16.
Naphtha, V. M. and P. deod. ..	13·00	13·00
Gasolene, 86 deg.	25·00	23 00

Pennsylvanian Oil Runs from Jan. 7th to Jan 13th were :—Jan 7th, 153,198*; Jan. 8th and 9th, 211,817*; Jan 10th, 39,611*; Dec. 11th, 216,296; Dec. 12th, 242,626; and Dec. 13th, 166,078.

* Includes Illinois Oil.

The Deliveries of Pennsylvanian Oil from Jan. 8th to Jan. 14th were:—Jan. 8th, 211,062*; Jan. 9th and 10th, 347,984*; Jan. 11th, 166,815*; Jan. 12th, 188,149*; Jan. 13th, 169,966*; and Jan. 14th, 203,327*.

* Includes Illinois Oil.

Clearances for the Week.

During the week ended Jan. 15th and since Jan. 1, the clearances of petroleum, in gallons, from the port of New York, were as follows:—

	Week.	Year.	1908.
Refined	14,582,920	20,537,080	17,822,200
Crude	1,341,280	1,341,280	500
Naphtha	145,710	482,230	7,350
Residuum ..	3,250	10,500	5,000

Export Statistics.

The total exports from the port of New York and from the United States have been :—

	Gallons.
From New York, week ended Jan. 15th ..	20,785,173
Total from New York, from Jan. 1st, 1909 ..	28,724,053
Same period last year	23,763,434
Increase	4,960,619
From United States, week ended Jan. 15th	31,711,913
Total from United States, since Jan. 1st, 1909	49,671,765
Same period last year	40,524,191
Increase	9,146,574

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The "Review" Shipping List.

JANUARY 29, 1909.

(The following abbreviations are used in this table:—L. Left; P. Passed; Arr. Arrived; Sp. Spoken; Tr. Trading.)
Anglo-American Co.'s vessels marked thus (□): the Anglo-Saxon Co.'s tankers thus (*): and Messrs. Lane and Macandrew's thus (†).

Vessel.	From.	For.	Latest Date and Position.
ALCHYMIST	Algiers	Selzaete	L. Jan. 18
ALICE ET ISABELLE (Fr. bq.)	New York	Rouen	Arr. Dec. 16, in Port, Jan. 8
AMERICAN	Puerto Mexico	New York	P. Sand Key, Jan. 14
APPALACHEE □	New York	Lisbon & Oporto	At Lisbon, Jan. 24
APSCHERON	Batoum	Venice & Trieste	P. Constant'ple, Jan. 25
ARAL	Tyne	Philadelphia	Arr. Jan. 7, in Port, Jan. 16
ARAS	Penarth	Batoum	P. Gibraltar, Jan. 21
ASHTABULA □	San Francisco	Moji	L. Jan. 13
ASTRAKHAN	Tyne	Philadelphia	Arr. Jan. 15, in Port. Jan. 16
AUGUSTA	London	Puerto Mexico	Arr. Dec. 11
AUGUST KORFF	Manchester	Philadelphia	P. Old Hd, Kinsale, Jan. 25
AUREOLE	Galveston	Port Arthur (Texas)	Arr. Jan. 16
BAKU STANDARD	Ely Harbour	Cardiff	Arr. Jan. 24, in Port, Jan. 27
BALAKANI†	Batoum	Hamburg	P. Gibraltar, Jan. 24
BATOUM	Singapore	Channel	L. Jan. 25
BAYONNE	Genoa	Portico	L. Jan. 23
BEACON LIGHT	Kustendje	La Pallice	P. Constant'ple, Jan. 23
BLOOMFIELD	Galveston	Port Arthur	Arr. Jan. 12
BORJOM	Alexandria	Batoum	S. Constant'ple, Jan. 14
BRILLIANT	Gothenburg	Philadelphia	P. Dunnet Head, Jan. 13
BROADMAYNE	Kustendje	Vallo	S. Constant'ple, Jan. 21
BULLMOUTH*	Batoum	Colombo	Arr. about Jan. 25
BULYSSES*	Singapore	Saitozaki	L. Jan. 23
BURGERMEISTER PETERSEN	New York	Stettin	Arr. Jan. 24
BUYO MARU	Sabine Pass	Yokohama (via Suez)	At Singapore about Jan. 21
CALCUTTA (B. b.) □	San Francisco	Tsingtan	L. Nov. 11
CAPTAIN A. F. LUCAS (with S.O. Barge 95)	Hamburg	New York	P. Scilly, Jan. 11
CARDIUM*	Hamburg	Batoum	P. Constant'ple, Jan. 26
CARPATHIAN†	Portland (O.)	Port Arthur	L Jan. 16
CAUCASIAN†	London	Kustendje	P. Gibraltar, Jan. 25
CHARLOIS	Tyne	Philadelphia	P. Dunnet Head, Jan. 6
CHESAPEAKE □	Kustendje	—	P. Perim, Jan. 21
CHESTER	Philadelphia	Antwerp	P. Del. Break., Jan. 14
CITY OF EVERETT (with S.O. Barge 94)	Philadelphia	Boston	Arr. Jan. 8
CIUDAD DE REUS	Sulina	Rouen	Arr. Jan. 15
CLAM*	Aroe Bay	Balekpappan	L. Jan. 8
CLEMATIS	Tyne	Fernandina	P. Dover, Jan. 16
COALTAR (s.)	Port Talbot	Cork	Arr. Jan. 23
COL. E. L. DRAKE	—	—	Coasting U.S. and Pacific
COWRIE*	Soesoe	Samboe	Arr. Jan. 24
CUYAHOGA □	San Francisco	Shanghai	Arr. about Jan. 21
CYMBELINE	Bordeaux	Newport	L. Jan. 26
CZAR NICOLAI II.	Batoum	Hamburg	P. Sagres, Jan. 26
DAGHESTAN	Batoum	Hamburg	Off Ushant, Jan. 27
DAKOTAH □	Manila	Kobe and San Francisco	At Kobe, Jan. 12
DELAWARE □	Philadelphia & Liverpool	—	P. Easth'm Locks, Jan. 27
DERBENT	Batoum	Antwerp	P. Dungeness, Jan. 28
DEUTSCHLAND	Cette	New York	P. Tarifa, Jan. 17
DIAMANT	Stettin	Philadelphia	Sd. Tyne, Jan. 26
EDWARD DAWSON	Hull	New Orleans	Arr. Jan. 26
ELAX*	Yokohama	Kobe	L. Jan. 20
EL LOBO	Tyne	Port Arthur (Texas)	Arr. Jan. 3
ENERGIE	Danzig & Tyne	Philadelphia	P. Dunnet Head, Jan. 21
ERIVAN	Batoum	Dunkirk	Arr. Jan. 27
ETELKA	Cette	Marseilles	Arr. Jan. 12, in Port, Jan. 26
EUPLECTELA*	Rotterdam	Tyne	Arr. Dec. 28, in Port, Jan. 19
EXCELSIOR	Hamburg	New York	S. Tyne, Jan. 12
FRANCE MARIE (French bq.)	Philadelphia	Cette	?P. Cape Spartel, Jan. 26
GEESTEMUNDE	Copenhagen & Tyne	Philadelphia	P. Dunnet Head, Jan. 24
GENESSE □	Sunderland	New Orleans	Cld. St. Michael's, Jan. 22
GEORGIAN PRINCE	Novorossisk	Bordeaux	Arr. Jan. 24
GOLDMOUTH*	Singapore	Thameshaven	Arr. Jan. 26
GUTHEIL	Pillau	Philadelphia	P. Dunnet Head, Jan. 6
HAINAUT (Du. sh.)	Antwerp	New York	Off the Wight, Dec. 19
HARRY WADSWORTH	New Orleans	Porto Rico	Sd. Port Eads, Jan 11
HELIOS	Port Talbot	New York	Arr. Jan. 19
HERMIONE	Kustendje	Hamburg	P. Dover, Jan. 26
HESPERUS □	New York	Rotterdam	L. Jan. 21
HESPERUS	Honfleur	Tyne	Arr. Nov. 25
HOTHAM NEWTON	Zeebrugge	Kustendje	Off the Wight, Jan. 13
HYRCANIA	London	Batoum	Off the Wight, Jan. 24
IOANNIS COUTZIS	Batoum	Rouen	Pd. Constant'ple, Jan. 21
IROQUOIS □ (towing barge Navahoe)	London	New York	Arr. Jan. 15
J. B. AUG. KESSLER	Singapore & Port Natal	Europe	P. Cape Verde, Jan. 27
JAMES BRAND	Port Arthur (Texas)	Manchester	L. Jan. 18
JOYO MARU	Cardiff	Port Arthur	P. Barry Island, Jan. 23
JULES HENRI (French bq.)	Marseilles	Philadelphia	P. Tarifa, Jan. 1
KURA	Foynes	Newport	Arr. Jan. 10, in Port, Jan. 26
LA CAMPINE	Antwerp	New York	L. Jan. 27
LA FLANDRE	Ghent	Philadelphia	At Fayal, Jan. 25
LA HESBAYE	Philadelphia	Rotterdam	L. Jan. 13
LACKAWANNA □	Savona	Kustendje	Sd. Constant'ple, Jan. 21
LANSING	San Francisco	Ancon	S. Panama, Jan. 4
LE COQ†	New York	La Pallice	L. Jan. 16
LOUTSCH	Batoum	Havre	Anchrd. Gallipoli, Jan. 25
LUCERNA	Novorossisk	London	At Thameshaven, Jan. 25
LUCILINE†	Rouen	Batoum	L. Jan. 27
LUMEN	Ghent	Tyne	Arr. Jan. 5, in Port, Jan. 26
LUTETIAN†	Del. Break	Havre	L. Jan. 25
LUX†	Algiers	Batoum	L. Jan. 25
MAKKAVEI	Alexandria	Batoum	S. Constant'ple, Jan. 19
MANHATTAN	Batoum	New York	Arr. Jan. 15
MANNHEIM	Philadelphia	Hamburg	Arr. Jan. 6, in Port, Jan. 23
MARGARETHA	Kustendje	Hull	S. Constant'ple, Jan. 17
METEOR	Vladivostock	—	S. Suez, Jan. 27–8
MEXICAN PRINCE	Christiana	Stockton	Arr. Jan. 19, in Port, Jan. 25
MIRA	—	—	In Port Blyth, Jan. 26
MUREX*	Lobitos	—	L. Jan. 24
NARRAGANSETT □	London	New York	Arr. Jan. 18

Vessel.	From.	For.	Latest Date and Position
NEWYORK	Rotterdam	New York	Off the Wight, Jan. 19
NIAGARA	Moji	San Francisco	L. Jan. 15
OBERON	Penrith	Port Arthur	L. Jan. 22
OCEAN	Tyne	Batoum	S. Constant'ple, Jan. 20
OILFIELD	New York & Bordeaux	Tyne	Arr. Dec. 10, in Port, Jan. 27
OKLAHOMA	New York	Port Arthur	642 mls. S. Sandy Hook, Jan. 12
ORIFLAMME†	Cette	Philadelphia	L. Jan. 26
OTTAWA □	Manchester	Philadelphia	Arr. Jan. 24
OURAL	Batoum	St. Louis (Rhone)	P. Constant'ple, Jan. 20
PAUL PAIX	Hartlepool	Batoum	S. Constant'ple, Jan. 19
PAULA	New York	Hamburg	Arr. Jan. 12, in Port, Jan. 24
PECTAN*	Manchester	Gulf of Mexico	P. South Stack, Jan. 28
PENNOIL	Philadelphia	Hamburg	At Rotterdam, Jan. 26
PETROLEINE	Philadelphia	Cette	P. Gibraltar, Jan. 27
PHOEBUS	Hamburg & Tyne	New York	Arr. Jan. 24
PINNA†	Yokohama	Payta	L. Jan. 15
POTOMAC □	New York	Birkenhead	Arr. Jan. 23, in Port, Jan. 27
PROGRESSO ARGENTINA (Ar. bq.)	Buenos Ayres	Port Arthur (Texas)	Arr. Jan. 12
PROMETHEUS	Clyde	Yokohama	Sd. Port Tewfik, Jan. 8
PRUDENTIA	Hull	New York	P. Beachy Head, Jan. 12
PURELIGHT	Tyne	Philadelphia	L. Jan. 12
QUEVILLY (Fr. bq.)	New York	Rouen	L. Jan 12
RENDOVA (Br. bq.)	Seville	Philadelphia	Arr. Jan. 13, in Port, Jan. 16
RION	Tyne	Philadelphia	L. Jan. 13
ROCK LIGHT†	Pera	London	P. Dover, Jan. 27
ROMANY*	Singapore	Kobe	L. Jan. 20
ROTTERDAM	Amsterdam	New York	P. Scilly, Jan. 17
ROUMANIAN†	Newport	London	L. Jan. 21
RUSSIAN PRINCE	Cienfuegos	Liverpool	L. Jan. 23
SALAHADJI	Balekpappan	Pladjoe	L. Jan. 6
SAN CRISTOBAL	Newp't News	Liverpool	L. Jan. 26
SAN IGNACIO DE LOYOLA (Sp. bq.)	Pasages	Philadelphia	L. Dec. 31
SANTA MARIA	Tocopilla	Port Harford	Arr. Jan. 10
SANTA RITA	San Francisco	Guatemala	L. Jan. 1
SARANAC □	Calcutta & Singapore	—	P. Gibraltar, Jan. 22
SAXOLEINE	Philadelphia	Rouen	L. Jan. 15
SCHUYLKILL	New York	Batavia	Arr. Jan. 17
SEMINOLE □	San Domingo	New York	Arr. Jan. 6, in Port, Jan. 13
SERVIAN†	Port Arthur (Texas)	Antwerp	L. Jan. 22
SNOWFLAKE	Bergen	Tyne	Arr. Jan. 23
SOYO MARU	Port Arthur (Texas)	Yokohama	Cld. Singapore, Dec. 1
SPONDILUS*	Calcutta	Aroe Bay	L. Jan. 24
STANDARD	Hamburg	Havana	P. Prawle Pt., Jan. 22
STROMBUS*	Batoum	Colombo	Sd. Suez, Jan. 25
SULTAN VAN LANGKAT	Freshwater	Shanghai	L. Jan. 15
SUN	Sabine Pass	Philadelphia	Arr. Jan. 10
SUNLIGHT (Br. bq.)	Dunkirk	Port Talbot	L. Dec. 29
SURAM	Port Arthur	Manchester	S. Newport News, Jan. 16
SUWANEE □	Sunderland	Tyne	Arr. Jan. 10, in Port, Jan. 26
SVIET	—	—	Trading Levant and Black Sea
TAMARC □	Philadelphia	London	P. Dover, Jan. 26
TELENA*	Sabang	Europe	Sd. Las Palmas, Jan. 25
TEREK†	Philadelphia	Manchester	Arr. Jan. 15
TEXAS	Avonmouth	Port Arthur (Texas)	Arr. Jan. 24
TIFLIS	Batoum	Antwerp	L. Jan. 23
TIOGA □	Liverpool	New Orleans	P. Old Head Kinsale, Jan. 17
TONAWANDA □	Hong Kong	San Francisco	Arr. Jan. 13
TROCAS	Calcutta	Rangoon	L. Jan. 22
TUSCARORA	San Francisco	Moji	L. Jan. 7
VEDRA	Palembang	Hiogo	Arr. prev. Jan. 7
VILLE DE DIEPPE (Nor. bq.)	Philadelphia	Rouen	L. Jan. 17
VOLUTE	Palembang	Balekpappan	L. Jan. 21
WASHINGTON	Hamburg	Baltimore	Off the Wight, Jan. 21

Latest Market Intelligence.

LONDON OIL MARKET.

Supplied by Messrs. Benjamin & Gee, 31, St. Mary Axe, E.C.

Jan. 29th, 1909.

Present prices of Refined Petroleum are as follows:—Russian Spot, 6¼d. to 6⅝d.; American, 7d. to 7¼d.; Water White, 8d. to 8¼d.; Roumanian, 7d.

LUBRICATING OILS

The following are the latest quotations:—

American pale, £6 10s. to £10 10s.
American dark cylinder, from £8.
American filtered cylinder, from £11 5s.
No. 1 Russian, for Spot, £8 7s. 6d.

TURPENTINE.

American Turpentine has been slightly firmer since our last report but has again receded, though somewhat in advance of previous prices quoted:—American Spot, 30s. 7d½. to 30s. 9d.; February to April, 30s. 10½d.; March to April, 31s. 3d.; May to August, 31s. 9d.; July to December, 32s. 6d.

LIVERPOOL OIL MARKET.

Jan. 29th.

Refined oils are quiet, and sellers quote 6¾d., for Russian, Galician or Roumanian; and 7¼d. to 8¼d. per gallon for American.

PETROLEUM SPIRIT continues at 1s. 0d. to 1s. 1½d. per gallon for American deodorised, according to quality on the spot.

LATEST AMERICAN PRICES.

NEW YORK, Jan. 28th.

Refined, in cases, is steady at 10·90; Standard White, 8·50; Credit balances, 1·78c.

PHILADELPHIA, Jan. 28th.

Standard White is now quoted at 8·45.

RUSSIA.

BAKU, Jan. 25th.

The Baku oil market is firm. Crude oil, spot, 19 copecs per pood. Residuals, 21 copecs. Kerosene, in ships, 25¾-25½ copecs.

BELGIUM.

ANTWERP, Jan. 25th.

The petroleum market is firm. Price of Standard White, spot, 22 francs per 100 kilos; February, 22¼.

FRANCE.

PARIS, Jan. 21st.

Illuminating oil is quoted in bulk, in whole tank waggons, 25·75 francs per hectolitre; spirit, 34·50 francs per hectolitre. Special white oil, in barrels or cans, 33·75 francs per hectolitre.

GERMANY.

HAMBURG, Jan. 25th.

The kerosene market is firm. The price of American Standard White is 7.70 marks per 50 kilos.; Galician, 7.35 marks.

HOLLAND.

AMSTERDAM, Jan. 25th.

The petroleum market remains firm. American Standard White, spot, 12·20 florins per 100 kilos.

ROUMANIA.

Jan. 23rd.

	Francs.
Crude oil from different fields, including pipe line charges, per 100 kgs.	4·50–4·70
Refined oil, exclusive of taxes, ex. refinery	8·70
Benzine, 717–720, including taxes	20·00
Benzine, 750–760	15·00–15·50
Residuals in tank waggons, at refinery	4·30– 4·35
Paraffin	120·00

PRICES FOR EXPORT.

Refined oil, f.o.b., per 100 kgs.	7·50–8·00
Benzine, sp. gr. 0·710–0·715, f.o.b.	17·00–18·00
„ sp. gr. 0·715–0·720 „	15·00–16·00
„ sp. gr. 0·730–0·740 „	10·00–11·00
„ sp. gr. 0·745–0.755 „	9·00–10·00

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IMPORTS of PETROLEUM into UNITED KINGDOM

Specially prepared for this Journal by the Custom House.

FOR THE WEEK ENDED 18TH JANUARY, 1909—

Date.	Port and Importers.	Description.	No. of Gals.	Port Whence.
Jan.	LONDON—			
12	London & India Docks Co.	Lub.	800	Hamburg
12	"	"	400	"
13	B. Jacob and Sons, Ltd.	"	2,000	"
13	Homelight Oil Co. (Hyrcania)	Lamp	1,804,930	Batoum
13	G. Haller and Co.	Lub. Oil and Gr.	200	Antwerp
13	Scott's Wharf	Lub.	2,000	New York
14	Mercantile Lighterage Co.	"	5,750	"
14	Anglo-American Oil Co.	"	37,000	"
14	London and India Docks Co.	"	320	"
14	Houlder Bros. and Co , Ltd.	"	480	"
14	Snowden Sons and Co., Ltd.	"	12,100	Riga
14	Vacuum Oil Co.	"	500	Copenhagen
14	Page, Son and East	Lub. Oil and Gr.	680	Antwerp
15	Mordaunt Bros	Lub.	5,400	Baltimore
16	Union Lighterage Co.	"	4,280	Marseilles
16	Argo Steamship Co.	"	300	Bremen
16	Asiatic Petroleum Co.	Spirit Illum.	5,000	Rotterdam
16	Scott's Wharf	Lub.	6,000	New York
18	J. Waldock	"	7,350	Philadel.
18	T. H. Lee	Lub. Gr.	600	Hamburg
18	London and India Docks Co.	Lub.	5,140	"
18	Page, Son and East	"	680	Antwerp
18	British and Foreign Wharf	"	420	"
18	H. Finckler and Co.	Resid. Lub.	8,090	Trieste
	LIVERPOOL—			
13	Vacuum Oil Co,	Lub.	11,560	New York
14	Pickfords	Lub. Oil and Paste	420	Hamburg
14	Meade-King, Robinson & Co.	Lub.	3,200	"
14	"	"	3,000	New York
14	W. Harper and Sons	"	1,000	"
14	G. B. Taylor	"	2,160	"
14	Fellows Morton & Clayton	"	1,000	"
14	R. Crooke, Jun.	"	2,250	"
14	Ismay, Imrie and Co.	"	2,000	"
14	Cunard Steamship Co.	"	250	"
15	G. B. Taylor	"	51,200	"
15	E. H. Kellogg and Co.	"	6,400	"
15	Anglo-American Oil Co. (Aug. Korff)	"	701,070	Philadel.
16	Meade-King, Robinson & Co.	"	13,160	Baltimore
4	(By A.R.) "	Crude	40,540	Pt. Arthur
18	Worthington and Boler	Lub.	9,400	Philadel.
18	"	M. Colza	600	"
18	W. Gibson and Sons	Lamp	2,050	Boston
18	American Express Co.	Lub.	40	"
18	A. Hopps and Sons	"	10,580	Baltimore
18	"	M. Colza	5,520	"
18	C. W. Field and Co.	Lub.	200	Antwerp
18	C. C. Wakefield and Co.	Lub. Gr.	940	"
Jan.	BRISTOL—			
12	J. and R. Bush	Lub.	23,800	New York
12	Spillers and Bakers	"	1,000	"
15	Anglo-Bosphorus Oil Co.	Lub. Gr.	2,520	Hamburg
	GRIMSBY—			
15	J. Sutcliffe and Son	Lub.	1,800	Antwerp
	HULL—			
14	T. Wilson, Sons and Co.	"	2,000	Reval
14	Wilsons and N.E. Co.	"	1,140	Hamburg
14	"	"	800	Antwerp
14	Hull & Netherlands S.S. Co.	"	440	Rotterdam
15	"	Tar Oil	1,040	"
15	T. Wilson, Sons and Co.	"	1,000	Stockholm
16	"	Lub.	96,880	New York
16	"	"	42,800	"
18	W. Gilyott and Co.	"	23,000	"
18	Wilsons and N.E. Co.	"	240	Antwerp
	MANCHESTER—			
14	J. Ashworth and Co.	"	800	New York
14	Schofield and Co.	"	140	Hamburg
15	British Pet. Co. (Terek)	Lamp	1,352,000	Philadel.
15	Bramwell, Fern and Co.	Lub.	20,210	"
15	"	Lamp	880	"
15	Manchester Liners, Ltd.	Lub.	13,000	"
16	Pickford's, Ltd.	"	120	Riga
16	Meade-King, Robinson & Co.	"	27,600	Philadel.
18	George B. Taylor	"	72,600	"
	MIDDLESBRO'—			
13	J. J. Sutherland	"	1,080	Antwerp
	NEWCASTLE—			
12	Tyne-Tees S.S. Co.	"	4,520	"
12	"	"	400	Hamburg
12	"	"	200	Rotterdam
	PLYMOUTH—			
12	Bristol Steam Nav. Co.	Lub. Oil and Gr.	570	Antwerp
	SOUTHAMPTON—			
14	P. E. Curry	Lub.	22,800	New York
	DUNDEE—			
15	D. Alexander and Sons	"	400	Hamburg
	GLASGOW—			
14	Anchor Line	"	45,770	New York
14	Clyde Shipping Co.	"	110	Antwerp
	GRANGEMOUTH—			
15	J. Currie and Co.	Lub. Oil and Paste	2,900	Hamburg
15	"	"	4,520	"
15	W. Graham-Yooll and Co.	Lamp	6,000	"
15	"	"	4,000	"
	LEITH—			
14	W. Graham-Yooll and Co	"	11,600	"
14	J. Currie and Co.	Lub.	140	"

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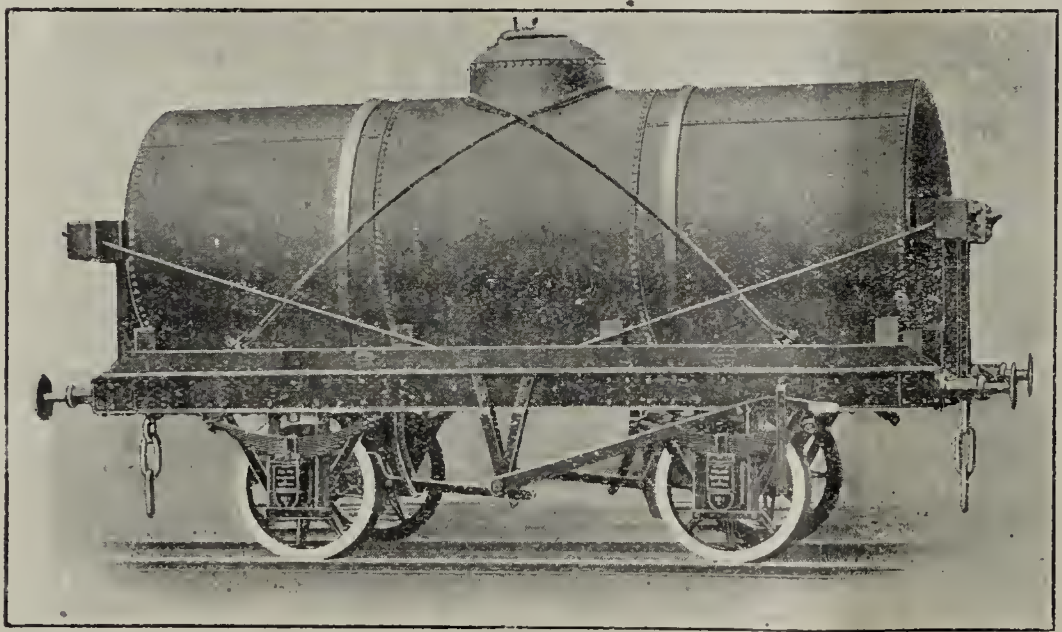

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IMPORTS.—(*Concluded*).

Date.	Port and Importer.	Description.	No. of Galls.	Port Whence.
Jan.	LEITH—			
18	J. Currie and Co.	Lub.	2,000	Hamburg
18	W. Graham-Yooll and Co.	Lamp	6,670	"
14	G. Gibson and Co.	Lub.	2,400	
			4,580,850	
	Deduct to Correct—			
	LIVERPOOL—			
22/12	Meade-King, Robinson & Co.	Resid.	39,140	Batoum
22/12	" "	Lub.	40,440	"
	BARROW—			
8/12	Anglo-Saxon Oil Co.	Benzine	77,200	Pulo Samboe
	MANCHESTER—			
16/12	Anglo-American Oil Co.	Lamp	43,000	New York
31/12	"	Gas	15,160	Philadel.
	Total for Week		4,365,910	

FOR THE WEEK ENDED 25TH JANUARY, 1909—

Date.	Port and Importer.	Description.	No. of Galls.	Port Whence.
Jan.	LONDON—			
19	G. Haller and Co.	Lub. Oil and Gr.	200	Antwerp
19	Fielder, Hickman and Co.	Lub.	3,800	New York
19	Mordaunt Bros.	"	7,500	"
19	Ocean Oil Co.	"	40	Stockholm
20	A. Brown and Co.	"	4,000	Philadel.
20	Petroles de Grosyni (Lucerna)	Res. Spirit	190	Novorossisk
20	" "	Crude	886,230	"
20	Anglo-American Oil Co.	Lub.	90,800	New York
20	"	Lamp	5,960	"
20	London and India Docks Co.	Lub.	1,000	Hamburg
20	Pickford's	"	60	Naples
20	Bowring Petroleum Co.	"	4,190	Philadel.
22	Juett and Cain	"	4,800	"
21	Langley, Smith and Co.	"	6,000	"
21	J. R. Grant	Lub. Gr.	70	Brussels
21	Page, Son and East	Lub.	80	Antwerp
21	Anglo-American Oil Co.	"	33,880	Philadel.
25	" (Tamarac)	Gas	1,574,000	"
25	Union Lighterage Co.	Lub.	9,450	"
25	W. H. J. Alexander	"	3,900	"
25	Asiatic Petroleum Co. (Goldmouth)	Benzine	2,577,300	Pulo Samboe
25	H. Finckler and Co.	Resid. Lub.	18,640	Fiume
25	A. Brown and Co.	Lub.	560	Hamburg
25	British and Foreign Wharf.	"	200	Antwerp
25	J. Harrison	"	130	"
	LIVERPOOL—			
19	J. T. Fletcher and Co.	"	250	"
19	W. B. Dick and Co.	"	52,220	Philadel.
19	Midland Railway	"	1,630	"
19	Crew, Levick and Co.	Resid.	2,410	"
19	"	Lub.	12,390	"
19	"	M. Colza	5,620	"
19	G. B. Taylor	Lub.	47,000	"
19	Meade-King, Robinson & Co.	"	26,600	"
19	Stockdale and Doel	"	6,220	Boston
20	Pickford's, Ltd.	Lub. Oil and Paste	90	Hamburg
20	Meade-King, Robinson & Co.	Lub.	6,000	Philadel.
20	Bowring Petroleum Co.	"	1,540	"
22	Ismay, Imrie and Co.	"	1,160	New York
22	Vacuum Oil Co.	"	2,560	"
23	G. B. Taylor	Lub.	27,160	"
25	Valvoline Oil Co.	"	21,730	"
25	Crew, Levick and Co.	"	50	Philadel.
25	Anglo-American Oil Co. (Potomac)	Lamp	972,190	"
25	Pickfords	Lub. Oil and Paste	290	Hamburg
25	Schlieman's Oil Co.	Lub.	290	"
25	C. W. Field	"	210	Antwerp
	BRISTOL—			
19	O. Pragnell and Co.	Lamp	300	Amsterdam
19	E. Stock and Sons	Lub.	2,000	Hamburg
20	H. Pritchard and Co.	Lamp	2,100	New York
20	"	Lub.	4,830	"
21	H. R. James and Sons	"	7,000	"
21	Pickfords	Lub. Oil and Paste	280	Hamburg

Date.	Port and Importers	Description.	No. of Galls.	Port Whence.
Jan.	CARDIFF—			
23	Guthrie, Heywood and Co.	Lub.	5,200	Baltimore
	GRIMSBY—			
19	J. Sutcliffe and Son	"	480	Antwerp
19	"	"	280	"
	HARWICH—			
21	D. Howard	"	90	"
	HULL—			
21	Wilsons and N.E. Co.	"	1,520	Hamburg
21	"	"	3,600	Antwerp
21	"	Lamp	70	"
25	"	Lub.	240	"
	MANCHESTER—			
19	Crew, Levick and Co.	"	7,700	Philadel.
20	Lamport and Holt	"	840	New York
20	D. Currie and Co.	"	240	Hamburg
20	Anglo-American Oil Co. (Aug. Korff)	"	665,380	Philadel.
21	Pickford's	"	160	Hamburg
22	R. F. Sanderson and Co.	"	750	Riga
23	Geo. B. Taylor	"	28,400	New York
25	Bramwell, Fern and Co.	"	2,250	"
25	George B. Taylor	"	51,320	"
	NEWCASTLE—			
21	Tyne-Tees Steamship Co.	"	2,040	Antwerp
23	"	"	3,800	"
23	"	"	400	Hamburg
	NEWPORT—			
21	Mordey, Jones and Co.	Lub. Gr.	40	Antwerp
	SOUTHAMPTON—			
22	White Star Line	Lub.	240	New York
	SWANSEA—			
19	Richards, Turpin and Co.	"	2,400	"
	GLASGOW—			
19	Clyde Shipping Co.	"	400	Antwerp
19	J. and A. Allan	"	32,720	Philadel.
19	"	M. Colza	7,250	"
19	Anchor Line	Lub.	39,640	New York
	DUNDEE—			
21	D. Alexander and Sons	Lamp	240	Hamburg
	GRANGEMOUTH—			
22	J. Currie and Co.	Lub.	4,240	"
22	"	Tar Oil	400	"
21	W. Graham-Yooll and Co.	Lamp	4,000	"
	LEITH—			
19	W. Graham-Yooll and Co.	"	4,360	"
22	"	"	3,230	"
25	"	"	4,320	"
22	Geo. Gibson and Co.	Lub.	40	Antwerp
25	Henderson and McIntosh	"	800	Philadel.
25	J. Currie and Co.	"	280	Hamburg
	BELFAST—			
19	J. C. Pinkerton and Co.	"	50	"
21	G. Heyn and Sons	Lamp	1,000	Riga
22	"	"	12,600	N. Orleans
	DUBLIN—			
21	Anglo-American Oil Co. (Potomac)	Gas	273,740	New York
	CORK—			
17	Palgrave, Murphy and Co.	Lub. Oil and Paste	60	Hamburg
	Total for the Week		7,603,910	
	Total for the Fortnight		11,969,820	

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The Petroleum Review.

By PAUL DVORKOVITZ.

Vol. XX. *(New Series.)* February 13th, 1909. No. 444

THE PETROLEUM REVIEW:

The ANNUAL SUBSCRIPTION for both English and Foreign readers is 26s., including Postage. Single Copies may be had at the offices at 1s.

The Editor would esteem it a favour if readers, when communicating with the various firms advertising in our pages, would mention the "Review.".

Contributions upon items of interest are always welcomed from subscribers, but in each case these should be accompanied with the name and address of the sender, not necessarily for publication.

Editorial Notes.

The "Review's" Special Anniversary Issue.

We are confident that our readers will find the present issue of the Review, which, by-the-bye, forms its tenth anniversary issue, more than ordinarily interesting. Not only has its usual size been increased, but, as befitting such an occasion, several special features have been introduced. Possibly the most important is the article dealing with the oil tankers of to-day. The list, which is as complete and as up-to-date as it could possibly be, is bound to be greatly appreciated by those interested in the bulk transport of oil, and we have not the slightest doubt that for years to come, the list will be used upon many occasions for reference. Another article to which we would make special reference is that dealing with the resources of America, and written by Dr. Day. The author has treated the difficult subject in a most careful and comprehensive manner, and we know of no contribution to the literature of petroleum from his pen which will call for so much appreciation. We would commend our readers to give this more than passing notice: it will amply repay them. For a summary of the many contents of this issue we would direct attention to the index upon the centre page. Our readers will be interested in learning that never has an English petroleum journal had anything approaching the circulation which the present issue will have among all branches of the petroleum industry, while as shewing how extended is our permanent circle of subscribers, it may be mentioned that even with all our quick postal facilities, six weeks has to elapse after publication before many of our subscribers receive their Review. So wide is the sphere of influence of the journal which now celebrates its tenth anniversary.

Revival in the Batoum Export Trade.

The latest reports from Batoum are of a decidedly encouraging nature. The petroleum export trade is very brisk and from the 1st to the 24th of January, 1909, the shipments of illuminating oil to European ports amounted to 3,012,000 poods, which is almost double the quantity shipped during the corresponding period of 1908. Shipments of other products, consisting chiefly of lubricating oils and residues, also shew a remarkable improvement, namely, 1,848,000 poods as against 876,000 poods. The port of Batoum is unusually busy and vessels are arriving for cargoes one after the other. Practically all the firms operating at Batoum are sharing in this improvement, and are bringing up increased quantities of oil from Baku to be exported by themselves or for sale to other exporters. A feature of the trade is the increased arrivals of illuminating oil from Baku in tank waggons, which method of transportation seems to be preferred to the pipe line by reason of the smaller loss by leakage. An interesting fact to be recorded in connection with the revival in the Batoum trade is the resumption by the Asiatic Petroleum Co. of purchases of illuminating oil at Batoum for the Far East, the SS. "Strombus" having recently loaded for the account of this concern a cargo of kerosene and further shipments are expected to follow.

Capital in the Roumanian Petroleum Industry.

Some highly interesting figures are given in the latest issue of our contemporary, the *Moniteur du Petrole Roumain*, respecting the capital invested in the Roumanian petroleum industry. The total paid-up capital of the Joint Stock Companies operating in the petroleum fields is 213,500,000 francs; the capital of private firms and individuals is 19,000,000 francs; and adding to these two items the amount invested in sundry petroleum refineries and in the petroleum export installation at Constanza, a total is arrived at of approximately, 250,000,000 francs. To this sum another 50,000,000 francs represents the indebtedness of petroleum firms not secured by debentures, which makes a grand total of capital invested in the Roumanian petroleum industry of 300,000,000 francs, or, say, £12,000,000. It is interesting to analyse this total according to the nationality of the capitalists. It is, however, difficult to be exact on this point since companies created by capitalists of one nationality are frequently joined by capitalists of other countries. Subject, therefore, to this reservation the participation of the various nationalities in the Roumanian petroleum industry is:—Germany 120,000,000 francs, Roumania 42,000,000 francs, France 36,500,000 francs, Holland 38,000,000 francs, Italy 18,000,000 francs, U.S.A. 22,500,000 francs, England 10,000,000 francs, Belgium 8,000,000 francs, Austria-Hungary 3,000,000 francs, other countries 2,000,000 francs. When one recollects that ten years ago the total invested capital in the Roumanian industry did not exceed 25,000,000 francs (£1,000,000) it will be at once evident how rapid has been the development of this progressive country's oil-producing regions.

Dutch Companies during 1908.

The tone of the Amsterdam share market was rather irregular during the past year, though, for the Dutch companies, it was generally favourable. The production of some of the Dutch companies somewhat declined during the year, whilst the price of benzine, the most remunerative product of the Dutch companies, dropped very considerably. However, in general, the progress of the operations of the Royal Dutch Co. and its satellites, the Mœara Enim and Sumatra-Palembang Companies, was satisfactory enough to justify a firm quotation for their shares. The Royal Dutch Co. has certainly suffered, more or less, from the results of the competition in the benzine trade, but it is quite probable that the effects of this conflict will not be as extensive as might be imagined. From a reliable and well-informed source it is asserted that as far as Germany is concerned, the present competition affects only the trade with the refineries outside the benzine combine. The Syndicate's contract for the supply of benzine expires only in 1910. But, even on the present low prices of benzine, the Royal Dutch Co. is earning a substantial profit, and as regards the illuminating oil trade, 1908 will probably prove one of the most successful, if not the most successful, years during the whole time of the existence of the company. The production of crude oil by the Royal Dutch Co. for the year (including the output of the Nederlandsch Indische Industrie en Handel Maatschappij) amounted to 1,111,691 tons, as against 1,063,343 tons produced during 1907—an increase of 48,348 tons. Below are the figures of the production in 1908 of the principal Dutch-Indian Petroleum Companies:—

	1908. Tons.	1907. Tons.	1906. Tons.
Moeara Enim (crude oil) ..	125,600	143,100	151,000
Dordtsche Pet. Maats. (refd. oil)	106,678	104,185	99,722
Oost Borneo Maats. (crude) ..	95,550	106,100	82,972
Maats. Panolan (refined) ..	24,587	25,420	31,462
Pet. Maats. Zuid Perlak (crude)	43,096	13,340	—
Tarakan Petroleum Maats. ,,	28,325	17,150	—

◆

THE ROUMANIAN PETROLEUM REFINERIES.

OPERATIONS DURING DECEMBER.

The quantity of crude oil treated at the Roumanian petroleum refineries during December amounted to 75,011 tons, from which the following quantities of various products were obtained:—

	Tons.
Benzine	14,139
Refined oil and distillate	17,928
Lubricating oil	5,151
Residuals	36,538
Total	73,756

The quantities of various products delivered for home consumption in December were:—

	Tons.
Benzine	62
Refined oil and distillate	4,535
Lubricating oils	732
Residuals	28,931
Total	34,260

The stocks of various petroleum products at the refineries at the end of December were:—

	Tons.
Benzine	44,783
Refined oil and distillate	41,541
Lubricating oil	22,301
Residuals	51,460
Total	160,085

The output of paraffin in December was 38·9 tons; delivered for home consumption, 43·1 tons; stocks on December 31st, 61·4 tons.

LONDON OIL SHARE MARKET.

Friday, Febuary 12th, 1909.

General business on the Stock Markets is brisk and promising, and there has been increased activity in the Oil Share Section, which evinces a decided tendency to improve. Californian Oilfields have advanced $\frac{3}{8}$ to $5\frac{1}{4}$-$5\frac{1}{2}$, Burmah Oil Ordinarys have risen $\frac{1}{8}$ to $4\frac{15}{16}$-$5\frac{1}{16}$, and Spies are 6d. per share better at 10s. 3d. to 10s. 9d.

Assam Oil have fluctuated a good deal within narrow limits, and are strong at 16s. 6d. to 17s. 6d., at which figure, although no alteration is shewn on balance, a gain of 1s. 3d. is registered from lowest point touched in the interim, when price sagged to 15s. 3d. to 16s. 3d.

Lobitos Oil at 24s. to 25s. are also unaltered after being 6s. lower at 23s. 6d. to 24s. 6d. Russian issues have been dull but are a trifle firmer, the Ordinary and Preference shares being quoted at the rather wide price of 2s. 6d. to 3s. 6d.

◆

PRODUCTION OF ENGLISH COMPANIES IN RUSSIA.

Baku Russian Petroleum Co., Ltd.—The production for the week ended 30th January was 149,500 poods, or 2,410 tons; and for the week ended 6th February was 157,300 poods, or 2,536 tons.

Russian Petroleum and Liquid Fuel Co., Ltd.—The production for the week ended 30th January was 221,000 poods, or 3,563 tons; and for the week ended 6th February was 192,000 poods, or 3,905 tons.

Spies Petroleum Co., Ltd.—The production for the week ended 31st January was 229,740 poods, or 3,705 tons. The production for the corresponding week last year was 140,965 poods, or 2,273 tons. The output for the week ended 7th February was 243,755 poods, or 3,931 tons. The total production for the corresponding week last year was 132,710 poods, or 2,140 tons.

The European Petroleum Co., Ltd.—The production for the week ended 31st January was 149,396 poods, or 2,409 tons; and for the week ended 7th February was 141,284 poods, or 2,278 tons.

◆

IMPORTANT EXTENSION OF THE MEXICAN PETROLEUM FIELDS.

It is reported upon good authority that a mild boom has just been created in Mexico owing to the bringing in of a remarkably prolific gusher upon the outskirts of the Ebano field. The well, which is the property of the Mexican Petroleum Co., is said to be producing at the rate of 14,000 barrels per day. This company, which is backed by Californian capital, is prospecting over a very large area in Mexico, and it is now reported, according to the correspondent of the *Oil, Paint and Drug Reporter*, that it intends to build a pipe line from Ebano to Tampico for the purpose of transporting the oil to the large refinery of the Waters-Pierce Oil Co.

. . THE RUSSIAN PETROLEUM INDUSTRY . .

View of Russia's Famous Oil Centre, BAKU.

A Ten Years' Brief Retrospect.

The last ten years have witnessed many changes in the fortunes of the petroleum industry in Russia, which centres chiefly at Baku—changes all full of intense interest to those who closely study the trend of events in the world's oil fields. The production of the Baku fields during that period is given in the following table:—

		Production by Baling. Poods.	Production by Spouters. Poods.	Total. Poods.
1899	..	444,800,000	80,400,000	525,300,000
1900	..	532,900,000	67,800,000	600,700,000
1901	..	573,200,000	98,000,000	671,200,000
1902	..	542,100,000	94,400,000	636,500,000
1903	..	543,100,000	53,500,000	596,600,000
1904	..	578,400,000	36,200,000	614,600,000
1905	..	400,000,000	14,700,000	414,700,000
1906	..	439,900,000	9,000,000	448,900,000
1907	..	464,400,000	11,800,000	476,200,000
1908	..	455,200,000	10,000,000	465,200,000

The above figures reveal the disappointing fact that the total crude oil production at Baku is actually less than it was ten years ago by 60,000,000 poods, or about 1,000,000 tons. Production by baling it is true shews an increase of 10,000,000 poods, but on the other hand production by spouting has declined almost to vanishing point. Whilst in 1899 the oil obtained from spouters represented 15·4 per cent., in 1908 it was only 2·2 per cent. Although it is generally argued that spouters are a matter of chance and cannot be accepted as the firm basis of an industry, nevertheless the systematic and enormous decline in production by spouters at the Baku oil fields must be accepted as an incontrovertible proof of the gradual exhaustion of the strata, or at least of those parts of them which have hitherto been in exploitation. This is also evident from the production by baling, which, although slightly above that for 1899, has been obtained from nearly 2,000 wells, as compared with the 1,350 baling wells which were in exploitation in 1899. The average yearly production of a baling well has thus declined from 333,403 poods in 1899 to about 227,500 poods last year.

Considering the several fields separately, we find the greatest and most rapid decline has occurred at Balakhany, which is the oldest field. Spouters there have disappeared long ago, and the average productivity per well has come down as low as 2,0 poods per working day, while there are wells now in exploitation at Balakhany which yield much less than the above-mentioned figures. The exploitation of such wells is only possible by reason of the high prices which have lately been ruling for crude oil, and by the fact that at Balakhany most of the oil properties are either freehold or leased on easy terms, and generally the oil there is found at a much smaller depth than at the other fields, and thus the working expenses are correspondingly less. It is to be feared that in the event of an increased production at the newer fields, and a consequent return of crude oil prices to a normal level, a large part of the Balakhany wells will have to be abandoned, and the part played by that territory in the Baku industry will therefore fall still lower.

Saboontchi for the present continues to be the mainstay of the Baku petroleum industry, having contributed in 1908 42½ per cent. to the total production, as against 44 per cent. in 1899. The production of this field has also declined very considerably and also the productivity per well. At Saboontchi, however, there is still a great deal of undeveloped land, and the part of this field which adjoins Ramany approaches in productivity the last mentioned field. There can be no doubt that this region will for a long time play a predominant part in the industry.

Ramany and Bebe-Aibat, the newest and most promising of the Baku fields, have had development checked by the troubles which have in recent years afflicted the Russian petroleum industry. Ramany shews a decline in production in 1908 as against 1899 by about 20 per cent. Bebe-Aibat, although it shews an increase in production by 50 per cent. in 1908 against 1899, this must not be accepted as a sign of real progress, since in 1899 there were only a few plots in exploitation at Bebe-Aibat and, in 1903, when exploitation there had reached some development the output had increased to 157,300,000 poods, since when it has been declining.

Below are the figures of the production of the several Baku fields in 1899, 1901—when a turning point in output was reached—and in 1908:—

		1899.		1901.		1908.
Balakhany	..	114·9	..	117·8	..	68·8
Saboontchi	..	230·8	..	295·3	..	197·8
Ramany	..	98·6	..	124·2	..	78·9
Bebe-Aibat	..	80·8	..	133·6	..	119·5
Total	..	525·1	..	670·9	..	465·2

Ten years ago, when the production was steadily growing, everybody associated with the Russian petroleum industry was looking forward with confidence to see Russian oil occupying a predominant part in the world's petroleum trade. The difficulties which then had to be overcome were those arising from over-production, inadequate transport facilities on the

Transcaucasian railway and the organisation of the export trade.

The first serious trouble which disturbed the normal course of the Baku industry arose from the auction of leases of Government petroliferous lands, in 1900, when a large number of plots were leased out. Carried away by a spirit of reckless speculation, exaggerated royalties were offered and accepted by the Government, such as precluded all chances of profitable exploitation. The result was that these plots remained undeveloped for several years, whilst the lessees were petitioning the Government for a modification of the terms. No sooner was this trouble overcome when the labour movement began to assume a threatening view. In harmony with the general feeling of discontent and unrest which spread over Russia, differences arose between producers and their workmen, and consequent strikes became frequent, greatly interfering with the exploitation of the fields. These troubles culminated in the terrible massacres and incendiary fires of 1905 which wrought such terrible ruin, from which the industry has not yet recovered. Apart from the loss in production involved by it, the idleness of the large number of wells for a protracted period has lowered their productivity. The only hope of recovery, therefore, lies in the prospect of opening up fresh lands, of which a certain quantity is still available. Unfortunately the bulk of these lands belong to the Treasury, which for a long time could not decide on the terms upon which these lands are to be offered for exploitation. A bill dealing with this question was recently submitted by the Government to the Duma, but was rejected by the latter. A fresh scheme is now being elaborated, but even under the most favourable conditions, at least three years must elapse before these lands can help to increase the production.

During the past ten years, the exports of petroleum products from Russia have also undergone many fluctuations, in harmony with the vagaries of the crude oil production. In 1899, the total quantity of all products shipped from Batoum (at the time the only petroleum export port), amounted to 66,304,000 poods; the highest figure of exports was reached, not in 1901, which was the year of the highest crude oil production, but in 1903, when the combined petroleum exports of Batoum and Novorossisk amounted to 105,800,000 poods. In 1908, the total shipments from Batoum to foreign ports amounted to 37,800,000 poods, whilst the exports from Novorossisk may be estimated at about 2,500,000 poods, making a total of only just over 40,000,000 poods.

AMERICAN NOTES.

Enormous Tankage.—There are to-day no less than 250 steel storage tanks in the Oklahoma end of the Mid-Continent fields, and each of these tanks has a holding capacity of from 5,000 to 8,000 tons of oil. They are all full.

In South-Eastern Ohio.—A test well, far removed from the producing limits in South-Eastern Ohio, has been recently put down and shews signs for a good producer. It is thought this well may lead to the opening up of a new pool.

Testing Californian Territory.—The Standard Oil Co. has decided to spend $50,000, if necessary, upon two test wells in Altamont and Alameda counties. So far, the drill is down several hundred feet in each hole, but there are no indications of the presence of oil.

A New Development Company.—A new company under the title of the Steuben Development Company has recently been organised to sink test wells at Keuka, Steuben county, N.Y. Some time ago several wells in the district to be developed gave out quantities of gas.

Naphtha Exports.—During January, there were 805,000 gallons of motor spirit shipped from New York for the tanks of the Anglo-American Company at Barrow. This was the only shipment of naphtha made to this country from America during the month. The whole of the shipments of the spirit from New York were under 1,000,000 gallons for January.

The Oil Lands of Sabine District.—An effort is now being made to thoroughly test the oil lands in the Sabine district of Louisiana as to their gas and petroleum wealth. The work is to be undertaken by the Fort Jessop Oil Co., who intend to drill to a depth of 3,000 feet near Fort Jessop. It is generally believed that, as a result, a new field will be opened up in Louisiana.

Large Refined Oil Exports.—The oil tanker, "Narragansett," owned by the Anglo-American Oil Co., left New York on January 27, with a cargo of refined oil for London, amounting to over 3,600,000 gallons, this being the largest consignment of oil from America, thus far, this year. A few days earlier, the same company's vessel, the "Iroquois," cleared for London with 3,000,000 gallons on board.

The Mid-Continent Field Trouble.—There is considerable trouble in the Mid-Continent fields, and the producers are so discouraged that they are trying to arrange a general shut-down of their wells. Speaking upon the subject, the *Oil, Paint and Drug Reporter's* field correspondent says that the national government is is clogging the wheels of progress, and doing them more harm than all the other adverses combined.

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OPERATIONS OF RUSSIAN OIL COMPANIES.

MORE SUBSTANTIAL PROFITS.

The Bakht Petroleum and Trading Company in 1907 earned a profit of 4,000 roubles. The balance of losses of previous years stands at 203,613 roubles.

The Mosovilikha Petroleum Production and Contract Boring Company in 1907 earned a net profit of 122,169 roubles, of which 110,420 roubles was written depreciation and the balance was placed to the reserve fund.

The Sunik Petroleum Company in 1907, its sixth financial year, earned a profit of 5,392 roubles. The company has no debtors, and creditors for 614,767 roubles. The nominal capital is 840,000 roubles. The head office is at Baku.

The Rossiskoil Petroleum Company in 1907 earned a profit of 97,797 roubles. The company has debtors for 376,998 roubles, and creditors for 876,969 roubles. The nominal capital is 2,000,000 roubles and the depreciation fund stands at 210,525 roubles. The head office is in St. Petersburg.

The Moscow - Caucasian Petroleum Company, during its sixth financial year, earned a net profit of 160,913 roubles, out of which a dividend of three per cent. was distributed. The company has debtors for 490,000 roubles and creditors for 721,000 roubles. The nominal capital is 4,500,000 roubles; depreciation fund, 1,726,000 roubles; and reserve fund, 719,000 roubles.

The Votan Petroleum Company.—The report of the administration over the affairs of the Votan Petroleum Co. has resolved to apply the profits for 1907 in the following manner: to be written off as loss on the Balakhany property, 86,085 roubles; at Bebe-Aibat, 33,586 roubles; at Kara-Gez, 5,225; total, 124,897 roubles. In addition, 64,605 roubles are to be put to the depreciation fund and 3,242 roubles to be put to the reserve fund.

The Petrol Company in the financial year 1907-8, the ninth since the creation of the company, made a net profit of 89,384 roubles, which was applied toward writing off the losses of previous years. This loss, arising from the general catastrophe of August, 1905, still stands at 273,620 roubles. The company has debtors for 134,407 roubles and creditors for 334,601 roubles. The nominal capital is 2,000,000 roubles, whilst the depreciation fund stands at 407,577 roubles. The head office is in St. Petersburg.

The Mazout Company in 1907, its tenth financial year, had a gross revenue of 51,461,920 roubles, which left a net profit of 1,726,128 roubles, out of which a dividend of eight per cent. has been declared. The company has debtors for 19,404,775 roubles and creditors for 45,985,939 roubles. The nominal capital is 6,000,000 roubles; depreciation fund, 4,581,005 roubles; insurance fund, 950,000 roubles and reserve fund, 534,713 roubles. Head office in Moscow.

A DEVICE FOR ASCERTAINING THE DEVIATION OF BOREHOLES.

An English patent has recently been granted to Mr. Louis Gebhardt, of Nordhausen, Germany, for an invention relating to a device by means of which the degree of deviation of boreholes from the perpendicular can be ascertained.

The active part of the apparatus is guided by rollers cutting into the wall of the boring tube and is thereby prevented from turning, the active part registering the position of the boring tube and the absolute mid axis by means of a lead having a cutting point and an indicating lever which may be actuated and pressed down temporarily. The apparatus, which is provided with a registering mechanism, bears in its upper and lower portion each a centring device, which, at the same time, bears knives or edged discs, having guidances in axial direction and pressed by spring pressure into the wall of the boring tube, so that a reliable guidance of the apparatus is ensured. A clockwork first moves a lever in certain periods whereby a needle and a hammer or piston is pressed down, by which latter a piston and a rod, both guided within the lead, are actuated so that at the same time a second needle marks an endless strap, and after this has been done, and the parts brought back, a drum is turned in order to transport the said strap about a suitable length of its circumference.

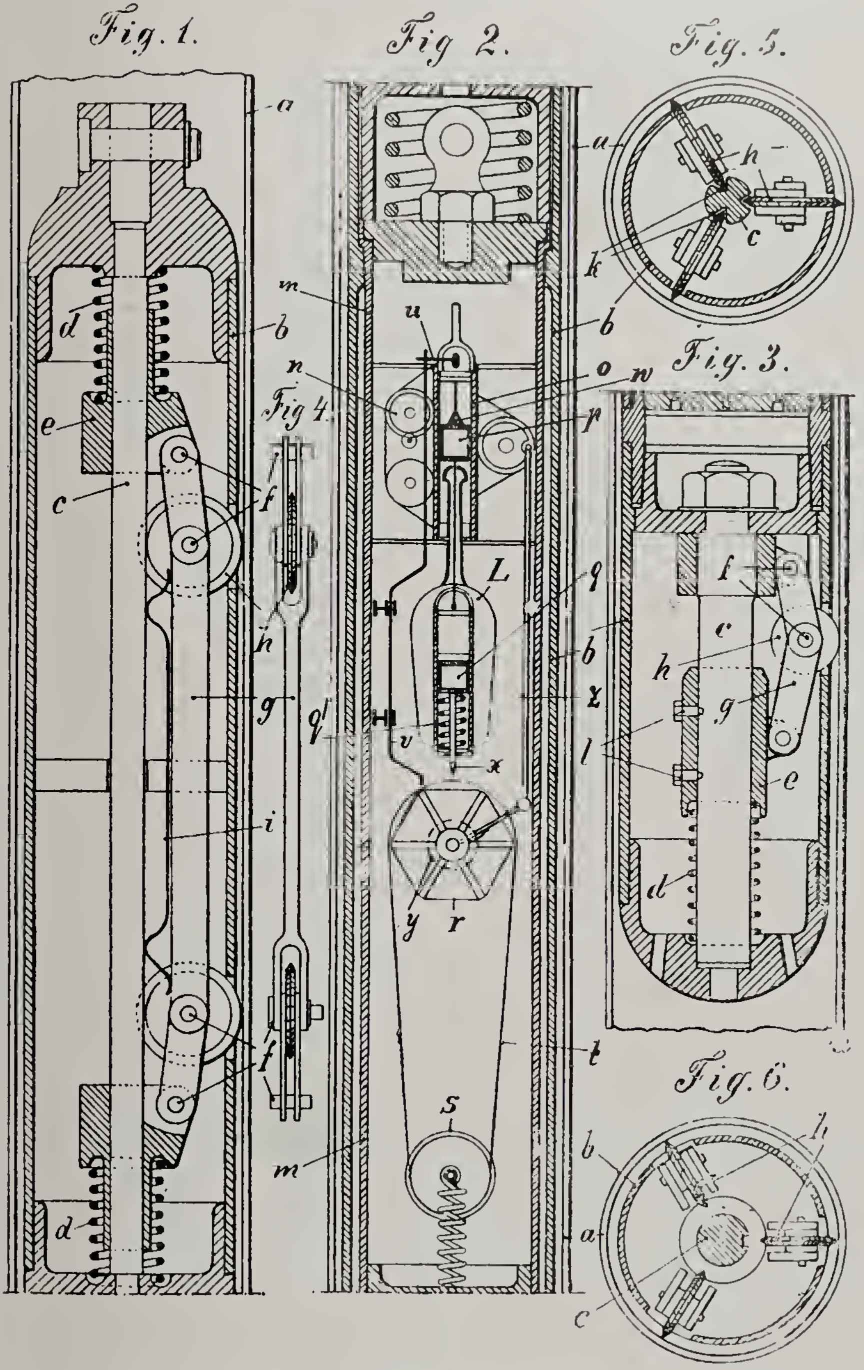
Fig. 1. Fig 2. Fig. 5. Fig 4. Fig. 3. Fig. 6.

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. . The World's Oil Tankers . .

How the Transport of Oil in Bulk has Expanded.

. . . An Enormous Development . . .

The bulk transport of petroleum and its allied products from one end of the earth to another, and the important part which this branch of the oil business now plays in international commerce, forms one of the most interesting chapters in the history of the industry.

The World's Largest Oil Tanker—the s.s. "Narragansett."

For the past twenty years the bulk oil transport business has been advancing at a rate practically unequalled in the annals of any other branch of marine expansion, until to-day we find petroleum products being carried in bulk upon practically every sea, and journeys necessitating six or seven weeks to traverse with petroleum in bulk being quite common things. It has been a marvellous expansion, yet one not easily pictured. The example of the bulk transport of petroleum products on the Caspian Sea has been followed throughout the world, and to-day several hundred bulk oil-carrying vessels—an enormous fleet—moves upon almost every sea of the globe. With the aid of the figures which we publish upon the succeeding pages, giving the dimensions of the 260 oil tankers now in constant employment, we hope that our readers will be able to gather an idea of how consistent has been the progress in this branch of the world's mercantile marine.

The New Tanker Built on the Isherwood System—the s.s. "Paul Paix."

Some five years ago, as a special supplement to the Review we gave a complete list of oil tankers then engaged in the transport service, there being at that time 232 boats with a gross tonnage of 580,000. Since that time, our English shipyards have been almost continuously busy in building additional boats, for last year alone no less than 24 new tankers were launched and, as our present list shews, the gross tonnage of the oil tankers to-day is approximately 700,000—a truly remarkable figure rendered all the more remarkable when the list of details is classified and analysed.

Perhaps the one most recent feature of the building of oil tankers has has been the introduction of the Isherwood system of construction, upon which system the oil tanker "Paul Paix" was built by Messrs. Craggs, of Middlesbrough, last year. We referred to this new development at the time it was introduced, and therefore we need only now say that the main point of attraction for the shipowner is that more deadweight can be carried owing to the structure of the tanker being lighter than under the ordinary methods of building, and in the "Paul Paix" we learn that the anticipated saving was 275 tons.

It is particularly interesting to note that the use of liquid fuel on board oil tankers is finding increased favour, and to-day outside bulk oil vessels quite a large number of the trading boats utilise the new fuel.

THE EVOLUTION OF THE OIL TANKER.

By EDWIN L. ORDE.
(Messrs. Sir W. G. Armstrong, Whitworth and Co., Ltd.).

In these utilitarian days the tank steamer may claim to have played a considerable part in bringing about changes in the conditions of life which have materially increased the amount of available comfort and placed it within reach of modest purses.

Since the advent of the ocean-going tank steamer, now some 24 years ago, the natural development of the oil trade, and the increase in the dimensions of tank steamers, have acted and reacted one on the other in a curious way which has produced some rather unexpected results.

After the first natural hesitation on the part of both owners and builders to adopt any but comparatively modest dimensions had been got over, the draft of water, available at the port of discharge was of course the predominating factor in fixing the size of tank steamers.

The early petroleum harbours, either from a desire on the part of the local authorities to isolate them as much as possible, or perhaps from natural disadvantages, imposed restrictions on the draught of tank steamers, which kept the proportion well within the limits considered necessary by the builders to secure a satisfactory distribution of strength. This was perhaps not without its advantages, for it enabled a complete examination to be made of the actual strains on loaded tank steamers induced by their action in a sea way and by the time that the exigencies of an increasing trade made larger vessels necessary, the builders had acquired such actual data as enabled them to attack their new design from the firm standpoint of precise knowledge. If such a thing as a standard size of tank steamer can be said to exist at any one time, the dimensions of the "Elbruz"—310 feet by 40 feet by 29 feet 6 inches may fairly be taken to represent the typical large tank steamer of her date. The liquid cargo was 3,600 tons, and with 400 tons of bunkers in addition, the draft was 22 feet. A speed of 9½ to 10 knots was all that was then considered necessary, and the general arrangements of the vessels differed but slightly from that now in vogue. After the first experience had shewn that cellular and other forms of double-bottoms were not only unnecessary, but in some cases an actual source of danger, the structure of the vessel was constantly undergoing modifications, arising out of the varying experience gathered from different trading routes and the paramount importance of workmanship was very soon discovered. One great question which arose at an early date was that of the arrangement of the longitudinals. It was contended, on the one hand, that there should be no break, but that all longitudinals should be continuous; on the other, that as this arrangement threatened the integrity of the bulkheads, all longitudinals should be "interclaustral," if the word may be permitted, and attached as strongly as possible to the bulkheads. The second method seems on the whole to offer the greatest advantages, and it was, therefore, generally adopted.

The position of the pump room, arrangements of piping, valves, connections, ventilation of liquid cargo spaces, and all the minutiæ of design received close attention, not only at the hands of the builders who had taken up this branch of naval architecture, but also by the classification societies and the consulting engineers, who were called in to advise many of the owners, and it is satisfactory to reflect that, although the cargoes carried in these steamers provided elements of considerable danger, the number of accidents on record is extremely small.

The general expansion of the oil trade, the increasing requirements of the consumers and the great progress that has been made in the manufacture and use of the internal combustion engine have made it necessary to increase the size of steamers, and to-day it is not too much to say that 6,000 to 7,000 tons may be regarded as the cargo of the ordinary tank steamer.

Special trades have found it advisable to go even further and the "Narragansett" and "Iroquois" of the Anglo American, and the large vessels of the Shell Co. shew a spirit of enterprise on the part of their owners that commands admiration. Such vessels are only successful when the trade route is clearly defined, and the loading and discharging ports have adequate berth accommodation, but for a general trading tank steamer 6,000 to 7,000 tons seems, at present, an amply sufficient cargo.

The speed has increased to eleven knots, which may be looked upon as the normal requirement to-day, and except in the case of some of the very large steamers mentioned above seems to meet all the necessities of the ordinary trade. The last ten years have seen a considerable change in the world's requirements for petroleum in its various forms, tank steamers have so far been able to keep pace with the increasing demand made upon them, but it is not too much to say that there is still room for modification and, if necessary, enlargement, so as to make them capable of coping with the developments which may be expected to arise in this important industry.

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THE WORLD'S OIL TANKERS.

COMPLETE LIST OF VESSELS CARRYING PETROLEUM IN BULK.

STEAMERS.

Name of Vessel.	Owners.	Builders.	When Built.	Port of Registry.	Dimensions.			Tonnage.	
					Length.	Breadth.	Depth.	Gross.	Net.
*Abas Dadescheff	A. A. Dadescheff	Caledonian S. B. Co., Dundee	1897	Baku	217.0	32.0	15.3	1035	704
*Abo	H. Z. A. Tagaieff	W. Crichton and Co., Abo	1873	Astrakhan	147.2	26.2	12.3	430	328
Adschi Aga	S. Ousejnoff	Kockums, M. V. Aktieb, Malmo	1897	Baku	182.0	30.0	16.7	1174	813
Aga Manafoff	M. S. Manafoff	W. Dobson and Co., Newcastle	1898	Astrakhan	237.4	32.0	16.7	1175	984
Aga Selim	M. D. and A. Sadikoff	Oderwerke, A. G., Stettin	1897	Baku	182.0	30.0	15.8	715	633
Alchymist	Burt, Bolton and Hayward	W. Dobson and Co., Newcastle	1895	London	147.5	24.1	12.8	382	343
Alekper Ousejnoff	M. B. H. Ousejnoff	Lindholmens M. V. Aktieb, Gothenburg	1902	Baku	285.9	32.5	17.8	1667	982
Alesgerje	Iskenderoff and Ousejnoff Bros.	Bergsunds, M. V. Aktieb, Stockholm	1894	Astrakhan	155.9	28.3	14.6	596	439
*Ali Dadescheff	A. A. Dadescheff	Kockums, M. V. Aktieb, Malmo	1893	Baku	151.6	27.8	14.0	639	355
Ali Onsejnoff	M. A. H. Ousejnoff	Bergsunds, M. V. Aktieb, Stockholm	1894	Astrakhan	151.9	28.3	14.8	600	450
*Alla Verdi	M. S. Manafoff	W. Dobson and Co., Newcastle	1894	Astrakhan	254.4	27.7	17.2	1019	683
*Amasie	Armenian SS. Co.	Do. do. do.	1894	Astrakhan	150.0	28.0	14.5	556	411
American	American Petroleum Co.	Palmer and Co., Ltd., Newcastle	1892	Rotterdam	345.4	44.1	27.6	3526	2266
Ani	St. Petersburg Co., Nadeshda	Boolds, Sharer and Co., Sunderland	1886	Baku	140.0	24.3	11.3	418	294
Anna	Stuken and Co.	A. G. "Weser," Bremen	1897	Astrakhan	224.5	31.5	17.2	1195	824
Appalachee	Anglo-American Oil Co.	Tyne I. S. B. Co., Ltd., Newcastle	1894	London	340.0	44.2	22.1	3767	2426
Apscheron	Soc. Anon. d'Armement d'Indus. et de Com.	Palmers' Co., Newcastle	1887	Antwerp	271.0	37.2	15.2	1864	1441
Aral	Aral SS. Co. (H. E. Moss and Co.)	Armstrong, Whitworth and Co., Newcastle	1891	Liverpool	310.0	40.2	28.2	2826	2160
Aras	Aras SS.Co.,Ld. (Stephen,Sutton & Stephens)	Palmers' Co., Newcastle	1893	Newcastle	325.0	42.7	21.0	3210	2088
*Argyll	Union S.S. Co.	W. Gray and Co , W. Hartlepool	1892	New York	320.2	40.7	24.4	2953	1880
*Ashot-Erkat	Armenian SS. Co.	W. Dobson and Co., Newcastle	1897	Astrakhan	224.6	32.0	16.6	1110	792
Ashtabula	Anglo-American Oil Co.	Palmers' Co., Newcastle	1903	Newcastle	428.0	54.7	30.5	7025	5427
*Asia	S. Assadoulaeff	Armstrong, Whitworth and Co., Newcastle	1898	Baku	229.6	32.0	17.2	1331	831
*Assa Dadascheff	A. A. Dadascheft	Lindholmens M.V., Gothenburg	1897	Baku	249.0	32.0	16.2	1233	715
Astrakhan	Astrakhan SS. Co. (H. E. Moss and Co.)	Palmers' Co., Newcastle	1892	Liverpool	330.0	42.9	28.7	3438	2236
Astych	S. I. Sakaroff and I. F. Skripinsky	Gebr. Sachsenberg, Rosslau	1897	Astrakhan	152.6	27.5	15.8	591	415
*Atlas	Standard Oil Cò. of California	Delaware River Co. Chester, Pa.	1898	Richmond, Cal.	248.0	40.1	22.5	1942	1243
Attaka	Kon. Neder. Maatschappij	Lobnitz and Co., Renfrew	1883	Pangkalan	134.0	25.6	15.8	310	140
August-Korff	Deutsche-Amerik. Pet. Ges.	J. C. Techlenborg, Geestemunde	1894	Hamburg	353.1	45.4	22.1	4055	2602
Augusta (Late Cadagua)	Reder. Banco.	Armstrong, Whitworth and Co., Newcastle	1892	Stockholm	295.0	39.0	25.4	2332	1569
Auréole	Northern Tank SS. Co. (Hunting and Sons)	Tyne I. S. B. Co.	1895	Newcastle	345.0	47.2	21.9	3975	2553
Azov	W. Keswick	Armstrong, Whitworth and Co., Newcastle	1892	Liverpool	285.0	38.5	25.9	2332	1512
*Babalan	Neder. Ind. Tank Maats.	Rijkee and Co., Rotterdam	1897	Pankalan	185.5	25.9	10.3	536	339
Baku Standard	European Petroleum Co.	Armstrong, Whitworth and Co., Newcastle	1893	London	330.6	43.0	23.0	3708	2375
Balakani	Petroleum SS. Co. (Lane and Macandrew).	Sir J. Laing and Sons, Sunderland	1899	London	335.0	45.0	28.0	3696	2367
Batoum	European Petroleum Co.	Do. do. do.	1893	London	345.0	44.7	22.0	4054	2621
Bayonne	Act. Ges. Atlantic	A. and J. Inglis, Glasgow	1889	Bremen	330.0	42.2	21.1	3294	2154
Beacon Light	Bear Creek O. and S. Co.	Armstrong, Whitworth and Co., Newcastle	1830	Liverpool	311.0	40.2	28.2	2763	2107

* Denotes the Vessels fitted for burning Liquid Fuel.

LIST OF VESSELS CARRYING PETROLEUM IN BULK.—STEAMERS—*Continued.*

Name of Vessel.	Owners.	Builders.	When Built.	Port of Registry.	Dimensions.			Tonnage.	
					Length.	Breadth.	Depth.	Gross.	Net.
*Beme	Burmah Oil Co.	Armstrong, Whitworth and Co., Newcastle	1904	Rangoon	309.5	41.5	20.5	3039	1899
*Besitang	Neder. Ind. Tank Maats.	Rijkee and Co., Rotterdam	1896	Batavia	150.5	24.0	10.5	417	294
Bloomfield	Hunting and Son	Tyne Iron S. B. Co., Newcastle	1899	Newcastle	350.0	50.2	22.5	4455	2869
*Borjom	Soc. de l'Indus. (Messrs. Mantascheff, Mgrs.)	Armstrong, Whitworth and Co., Newcastle	1896	Batoum	310.0	42.0	22.1	2941	1867
*Bremer Vulkan	K. D. Tagaieff	Bremer Vulkan, Vegesack	1898	Baku	185.5	30.5	16.0	886	525
Brilliant	Deutsche-Amerik. Pet. Ges.	Armstrong, Whitworth and Co., Newcastle	1890	Hamburg	318.5	42.0	29.5	3189	2011
Broadmayne	European Petroleum Co.	Palmers' Co., Newcastle	1888	London	334.4	44.0	16.9	3120	1947
Bullmouth	Anglo-Saxon Petroleum Co.	W. Gray and Co., W. Hartlepool	1893	London	347.0	45.6	26.7	4018	2607
*Bulysses	Do. do.	Armstrong, Whitworth and Co., Newcastle	1900	London	210.0	52.1	32.2	6069	3958
Burgermeister Petersen	Deutsche-Amerik. Pet. Ges.	Do. do. do.	1889	Hamburg	309.0	40.0	28.2	2785	1780
*Buyo Maru	Togo Kaisen Kaisha	Do. do. do.	1908	Yokohama	385.0	50.5	29.2	4952	3044
Cadillac	Anglo-American Oil Co.	Napier and Miller, Ltd., Glasgow	1908	London	384.6	51.7	28.2	5100	?
Capt. A. F. Lucas	Standard Oil Co.	W. R. Trigg and Co., Richmond	1904	New York	360.0	50.0	28.5	4188	3252
*Cardium	Anglo-Saxon Petroleum Co., Ltd.	Armstrong, Whitworth and Co., Newcastle	1900	London	410.0	52.1	32.2	6127	3994
Carpathian	Petroleum SS. Co., Ltd. (Lane & Macandrew)	Do., do. do.	1908	London	385.0	51.0	27.6	4900	3087
Catania	Coast Oil Transport Co.	A. Stephen and Sons, Glasgow	1881	San Francisco	307.4	35.7	22·6	3269	2535
Caucasian	Petroleum SS. Co., Ltd. (Lane & Macandrew)	Sir J. Laing and Sons, Ltd., Sunderland	1899	London	365.3	49.8	28.0	4656	3003
Chamid	F. M. and A. M. Rassuloff	J. W. Klawitter, Danzig	1903	Baku	250.3	22.5	17.5	1308	749
Charlois	American Petroleum Co.	Russell and Co., Greenock	1888	Rotterdam	310.3	39.2	25.2	2077	1919
Chesapeake	Anglo-American Oil Co.	D. J. Dunlop and Co., Glasgow	1895	London	370.0	47.1	27.8	4521	2886
Chester	American Petroleum Co.	Russell and Co., Greenock	1888	Rotterdam	311.7	39.2	25.0	2568	1637
Chorosan	Mamedoff and Djebrailoff	Nuescke and Co., Grabow	1897	Baku	152.4	27.8	13·8	606	365
Circassian Prince	W. Keswick	Swan and Hunter, Newcastle	1889	Newcastle	270.0	38.1	26.1	2258	1453
*City of Everett	Standard Oil Co.	American Steel Barge Co.	1894	New York	346.0	42.1	22.9	2595	1939
Ciudad de Reus	Sociedad La Mutua	Grangemouth Dock Co.	1893	Barcelona	260.0	36.2	17.0	1608	1250
*Clam	Anglo-Saxon Petroleum Co.	W. Gray and Co., Ltd., West Hartlepool	1893	London	338.0	43·0	26.4	3552	2311
Col. E. L. Drake	Standard Oil Co. of Cal.	W. Cramp and Sons, Philadelphia	1903	San Francisco	360·0	50·0	21.5	4205	3307
*Cowrie	Anglo-Saxon Petroleum Co.	Armstrong, Whitworth and Co., Newcastle	1896	London	376.0	48.0	29.9	4893	3155
Cuyahoga	Anglo-American Oil Co.	Do. do. do.	1902	Liverpool	370.3	48.5	28.8	4527	2929
Cymbeline	Bear Creek O. and S. Co.	Do. do. do.	1902	Liverpool	370.0	48.5	28.7	4505	2940
Czar Nicolai II.	Mineral Albrecht G.M.B.H.	F. Schichau, Danzig	1895	Hamburg	268.0	38.1	22.9	2076	1305
Daghestan	Soc. Anon. d'Armement et Commerce	Armstrong, Whitworth and Co., Newcastle	1898	Antwerp	304.0	40.0	25.4	2774	1786
*Dakotah (Late Tuscany)	Anglo-American Oil Co.	Do. do. do.	1902	London	350.0	47.0	27.6	4006	2593
Dana	Rederiaktieb, Dana	C. Olssen, Gamla, Lödöse	1897	Karlsbad	98.4	22.6	10.7	207	106
Danubian	Petroleum S.S. Co.	Messrs. Swan and Hunter, Wallsend	1909	London	339.6	51.6	30.3	—	—
Delaware	Anglo-American Oil Co.	D. J. Dunlop and Co., Glasgow	1893	London	345.0	44.3	23.0	3855	2469
Derbent	Soc. Anon. d'Armement et Commerce	Armstrong, Whitworth and Co., Newcastle	1907	Antwerp	310.0	43.0	26.8	3173	1924
Deutschland	Deutsche-Amerik. Pet. Ges.	A. G. Vulcan, Stettin	1893	Hamburg	339.1	43.7	29.6	3710	2355
Diamant	Do. do.	Armstrong, Whitworth and Co., Newcastle	1892	Hamburg	328.6	43.0	29.8	3445	2205
Edward Dawson	Lennards' Carrying Co., Ltd.	Do. do. do.	1890	Middlesbro'	265.0	37.0	23.4	1907	1245
El Gallo	R. Fernandy	Do. do. do.	1892	Santander	170.5	28.0	14.5	672	380
Elax	Anglo-Saxon Petroleum Co.	W. Gray and Co., W. Hartlepool	1893	London	347.2	45.6	26.7	3980	2571

* Denotes the Vessels fitted for burning Liquid Fuel.

LIST OF VESSELS CARRYING PETROLEUM IN BULK.—STEAMERS—*Continued.*

Name of Vessel.	Owners.	Builders.	When Built.	Port of Registry.	Diamensions.			Tonnage.	
					Length.	Breadth.	Depth.	Gross.	Net.
Elise Marie	Deutsche-Amerik. Pet. Ges.	Armstrong, Whitworth and Co., Newcastle	1889	Hamburg	318.6	42.0	29.5	3193	2041
Energie	Do. do.	Do. do. do.	1888	Hamburg	309.0	40.2	28.2	2762	1726
Erevan	Soc. Anon. d'Armement et Commerce	Palmers' Co., Newcastle	1893	Antwerp	285.0	38.6	25.8	2395	1631
Etelka	Photogen Societa Anon. di Transporti	Armstrong, Whitworth and Co., Newcastle	1892	Fiume	289.0	37.4	19.6	2370	1496
Euplectela	Anglo-Saxon Petroleum Co.	Do. do. do.	1894	London	340.0	44.0	22.9	3918	2507
*Excelsior	Deutsche Amerik. Pet. Ges.	A. G. "Vulcan," Stettin	1894	Hamburg	339.1	43.7	29.6	3710	2361
Ezio	F. G. Piaggio	Iliff Mounsey and Co., Sunderland	1870	Callao	231.0	31.1	23.6	1249	810
*Florida (Ex. Hondo)	The Texas Co.	R. Duncan and Co., Glasgow	1887	Port Arthur	230.0	35.5	18.5	1596	1052
Fumi Maru	Mikami and Tanaki	A. Leslie and Co., Newcastle	1881	Kobe	278.7	35.4	22.5	2079	1569
Gani Ousejnoff	Aga Dadach Ousejnoff	Bergsunds M. V. Aktieb, Stockholm	1899	Astrakhan	216.8	31.0	17.1	1089	851
Geestemunde	Deutsche-Amerik. Pet. Ges.	Armstrong, Whitworth and Co., Newcastle	1890	Hamburg	309.3	40.2	28.2	2773	1758
Genesse (Ex Darial)	Anglo-American Oil Co.	Do. do. do.	1889	London	310.0	40.2	28.3	2830	1833
George Loomis	Standard Oil Co. (of Cal.)	Union Iron Works, San Francisco	1896	San Francisco	175.0	27.4	16.5	691	402
Georgian Prince	The Prince Line (J. Knott, Managers)	Armstrong, Whitworth and Co., Newcastle	1893	Newcastle	328.0	42.0	20.1	3245	2078
*Goldmouth	Anglo-Saxon Petroleum Co.	Swan, Hunter and Co.	1903	London	471.0	56.0	33.2	7446	4863
*Gregory Artzrouni	Mdme. E. K. Sarkisoff	W. Dobson and Co., Newcastle	1894	Astrakhan	150.4	28.0	14.5	545	381
Gut Heil	Deutsche-Amerik. Pet. Ges.	Armstrong, Whitworth and Co., Newcastle	1888	Hamburg	309.5	40.2	28.2	2691	1715
*"Hadschi Hadschi Aga Dadascheff"	A. A. Dadascheff	Lindholmens M.V., Gothenburg	1903	Baku	249.2	33.0	16.7	1309	791
*Halaban	Ned. Ind. Tankst. Maats.	Rijkee and Co., Rotterdam	1893	Batavia	185.5	25.9	10.3	536	339
*Haliotis	Do. do.	Armstrong, Whitworth and Co., Newcastle	1898	Batavia	242.0	40.2	17.3	1659	1046
Han Ousejnoff	A. H. Ousejnoff and Co.	Bergsunds M.V. Aktieb, Stockholm	1897	Astrakhan	196.0	27.7	15.8	837	668
Harry Luckenbach (Ex Michegan, Ex. Surrey)	Estate of L. Luchenbach	W. Gray and Co., W. Hartlepool	1881	New York	300.0	40.2	34.5	2793	1799
Harry Wadsworth (Ex. Henri Rieth	Lennards' Carrying Co., Ltd.	R. Craggs and Sons, Middlesbro'	1893	Middlesbro'	280.0	38.5	18.0	2265	1474
Helios	Deutsche-Amerik. Pet. Ges.	D. J. Dunlop and Co., Glasgow	1894	Hamburg	333.5	43.2	21.6	3477	2211
Helios, Ex. Orange Prince (Abandoned)	Atieslsk "Helios"	Armstrong, Whitworth and Co., Newcastle	1889	Tonsberg	260.0	36.0	25.7	1931	1220
Hermione	Oil Tank SS. Co., Ltd. (C. T. Bowring and Co., Managers)	Swan, Hunter and Co., Newcastle	1908	Liverpool	385.5	50.5	30.3	5200	3201
Hespherus	Deutsche-Amerik. Pet. Ges.	Palmers' Co., Newcastle	1908	Hamburg	428.0	54.8	20.9	6303	3932
Hotham Newton	Lennards' Carrying Co., Ltd.	Sir R. Dixon and Co., Middlesbro'	1893	Middlesbro'	310.0	41.0	18.3	2648	1690
Ignatief	Kuznetzoff Bros.	W. Dobson and Co., Newcastle	1897	Astrakhan	223.0	32.0	16.5	1063	623
Imperial	Anglo-American Oil Co., Ltd.	Tyne Iron S. B. Co.	1898	London	200.0	32.0	14.4	796	412
Ioannis Coutzis (Ex. Caucase)	Coutzis Bros.	Armstrong, Whitworth and Co., Newcastle	1888	Piræus	250.0	35.1	24.3	1666	1158
Iroquois	Anglo-American Oil Co., Ltd.	Harland and Wolff, Ltd., Belfast	1907	Belfast	476.3	60.3	33.5	9202	5772
*J. B. Aug. Kessler	Kon. Neder. Maats.	Maats. Feyenoord, Rotterdam	1902	The Hague	377.0	50.0	21.7	5104	3198
*J. M. Guffey (Ex. Dollar)	Guffey Petroleum Co.	New York S. B. Co., Camden	1901	Port Arthur	292.2	40.2	23.5	2520	1593

* Denotes the Vessels fitted for burning Liquid Fuel.

LIST OF VESSELS CARRYING PETROLEUM IN BULK.—STEAMERS—*Continued.*

Name of Vessel.	Owners.	Builders.	When Built.	Port of Registry.	Dimensions.			Tonnage.	
					Length.	Breadth.	Depth.	Gross.	Net.
James Brand	European Petroleum Co.	Armstrong, Whitworth and Co., Newcastle	1893	London	340.0	44.1	23.0	3907	2512
Joyo Maru	Toyo Kaisen Kaisha	Do. do. do.	1908	Liverpool	385.0	50.5	30.2	5135	3149
Julia Luckenbach (Ex. Styria, Ex. Zaandam)	Estate of L. Luckenbach	Ned. Stomb. Maats., Rotterdam	1882	New York	313.0	39.4	29.9	3100	1977
*Jupiter	Soc. Com. and Indus. de Naphte "Mazout"	W. Dobson and Co., Newcastle	1897	Baku	275.6	31.7	18.0	1583	872
Karlsruhe	Ges. für Branerei, Spiritus—and Presshefen Fabr. vorm G. Sinner	Oderwerke, Grabow	1898	Stettin	173.2	28.5	13.7	637	371
*Kette	A. A. Dadascheff	"Kette," Deut. Elbs. Ges. Uebigau	1897	Baku	152.9	28.2	15.1	759	471
*Khodoung	Burma Oil Co , Ltd. (1902)	Armstrong, Whitworth and Co., Newcastle	1900	Rangoon	235.0	34.2	15.6	1457	913
Kura	Kura SS. Co., Ld (Stephens, Sutton & Stephens)	Do. do., do.	1889	Newcastle	294.0	37.7	20.2	2391	1532
La Campine	American Petroleum Co.	Palmers' Co., Ltd., Newcastle	1890	Rotterdam	309.7	39.0	26.3	2557	1982
La Flandre	Do. do.	Armstrong, Whitworth and Co., Newcastle	1888	Rotterdam	270.0	37.7	25.9	2018	1278
La Hesbaye	Do. do.	Do. do. do.	1888	Rotterdam	300.0	39.2	28.1	2555	1976
Lackawanna	Anglo-American Oil Co., Ltd.	D. J. Dunlop and Co., Port Glasgow	1894	London	345.0	44.3	23.0	3855	2468
*Lansing, Ex. Brit. Queen	Union SS. Co., Ltd.	Palmers' Co., Ltd., Newcastle	1890	New York	400.0	47.2	27.9	4561	3429
*Larimer	J. M. Guffey Petroleum Co.	New York S.B. Co., Camden, N.J.	1903	Port Arthur	352.5	46.4	19.2	3738	2397
Le Coq	Le Coq SS. Co., Ltd. (Lane and Macandrew)	Armstrong, Whitworth and Co., Newcastle	1895	Newcastle	330.0	42.7	28.4	3399	2169
Le Progrès	Cie. Univer du Canal, Maritime de Suez	Do. do. do.	1892	Port Said	163.0	26.8	13.3	449	205
*Ligonier	J. M. Guffey Petroleum Co.	New York S. B. Co., Camden, N.J.	1903	Port Arthur	352.5	46.4	19.2	3737	2397
Loutsch	Merkulieff	Hawthorn, Leslie and Co., Newcastle	1886	Odessa	255.5	34.2	17.9	1624	923
Lucerna	Lucerna SS. Co. (T. W. Tamplin and Co.)	Armstrong, Whitworth and Co., Newcastle	1892	Liverpool	330.0	42.6	28.5	3242	2072
Luciline	Luciline Nav. Co. (Lane and Macandrew)	Do. do. do.	1899	London	335.7	45.0	28.6	3765	2424
Ludwig Nobel	Naphta Productions Gebr., "Nobel"	Motala Co., Gothenburg	1888	Libau	187.5	29.0	19.6	965	557
Lumen	Lumen SS. Co. (H. E. Moss and Co.)	Armstrong, Whitworth and Co., Newcastle	1889	Liverpool	294.0	37.7	26.6	2402	1555
Lutetian	Le Fils de a Deutsch	Sir J. Laing and Son, Sunderland	1903	–	365.0	51.5	26.9	4574	—
Lux	Lux Nav. Co., Ltd. (Lane and Macandrew)	Forges et C. de la Medit., Havre	1898	London	281.5	39.0	27.1	2621	1634
Makkavei	M. and J. Rosenstein Bros.	Armstrong, Whitworth and Co., Newcastle	1900	Odessa	260.5	36.1	19.8	1727	905
*Mamid Shah	M. Rassuloff	Do. do. do.	1894	Baku	150.0	27.7	14.2	539	277
Manhattan	Act. Ges. Atlantic (Soc. Italo Americana pe Petrolis, Managers)	D. J. Dunlop and Co., Port Glasgow	1889	Bremen	330.0	42.2	21.2	3384	2183
Mannheim	Deutsche-Amerik. Pet. Ges.	Armstrong, Whitworth and Co., Newcastle	1892	Hamburg	328.5	43.0	29.8	3578	2287
Margaretha (Ex. Borneo, Ex. Attola	Soc. Anon. pel Commercio de Petroli et di Suoi derwati "La Mediterranea"	R. Craggs and Son, Middlesbro'	1889	Leghorn	280.0	37.5	18.0	2092	1247
Martin	S. M. Lianosoff	Bergsunds, M. V. Aktieb, Stockholm	1894	Baku	151.9	27.8	14.1	604	341
*Maverick	Standard Oil Co. (Cal.)	Columbian Dry Dock Co., Ltd., Baltimore	1890	San Francisco	240.0	36.2	17.0	1561	1118
*Mechti	Nagi Mechtieff	Sir W. G. Armstrong	1897	Astrakhan	180.0	31.5	14.5	789	483
Menastany	Gebr J. and J. Awetow	Deut. Elbs. Ges. "Kette," Uebigau	1897	Baku	152.7	28.0	13.7	630	363
Meteor	Merkulieff	R. Craggs and Son, Middlesbro'	1901	Odessa	349.6	47.0	21.1	4259	2546
Mexican Prince	Prince Line, Ltd. (J. Knott, Manager)	Swan and Hunter, Newcastle	1893	Newcastle	328.3	41.0	19.5	3028	1953
Mira	Mira SS. Co., Ltd. (Stephens, Sutton and Stephens)	Do. do. do.	1901	Newcastle	345.0	47.0	21.0	3700	2397
Mirza-Aga	Asim Iskenderoff	Kockums M. V. Aktieb, Malmo	1899	Astrakhan	179.7	30.0	15.8	799	590

* Denotes the Vessels fitted for burning Liquid Fuel.

LIST OF VESSELS CARRYING PETROLEUM IN BULK.—STEAMERS—*Continued.*

Name of Vessel.	Owners.	Builders.	When Built.	Port of Registry.	Dimensions.			Tonnage.	
					Length.	Breadth.	Depth.	Gross.	Net.
Misirje	Hadji B. Aschumoff	Deutsch Elbs. Ges. " Kette," Uebigau	1897	Baku	152.7	27.5	13.7	616	328
Moscow	Kascheevi Bros.	Bergsunds, M.V. Aktieb, Stockholm	1894	Astrakhan	151.0	27.7	14.3	580	444
*Murex	Anglo-Saxon Petroleum Co., Ltd.	W. Gray and Co., Ltd., West Hartlepool	1892	London	338.0	43.0	26.4	3564	2329
Narragansett	Anglo-American Oil Co., Ltd.	Scott and Co., Greenock	1903	Greenock	512.0	63.4	32.6	9196	5776
*Nerite	Ned. Ind. Industrie et Handel Maats. (Anglo-Saxon Petroleum Co., Ltd.)	Armstrong, Whitworth and Co., Newcastle	1904	Batavia	258.1	46.2	18.2	2042	1267
New York	American Petroleum Co.	Palmers' Co., Ltd., Newcastle	1902	Rotterdam	428.0	54.7	30.4	6859	4463
Niagara	Deutsche-Amerik. Pet. Ges.	Flensburger S. Ges., Flensburg	1908	Hamburg	441.0	58.5	30.7	—	—
*Northman	Texas Co.	Chicago S. B. Co.	1901	Port Arthur	242.0	42.2	23.2	2210	1306
*Northtown	Do.	Do. do.	1901	Port Arthur	242.0	42.2	23.2	2208	1297
*Northwestern	Do.	Do. do.	1901	Port Arthur	242.0	42.2	23.2	2207	1299
Oberon	Bear Creek O. and S., Ltd. (C. T. Bowring and Co., Managers)	Armstrong, Whitworth and Co., Newcastle	1907	Liverpool	385.0	50.5	30.2	5142	3161
Ocean	American Petroleum Co.	Russell and Co., Greenock	1888	Rotterdam	310.7	39.1	25.2	2560	1636
Oilfield	Hunting and Son	Tyne Iron S. B. Co., Newcastle	1896	Newcastle	345.0	47.2	21.9	4005	2564
Oriflamme	Oriflamme SS. Co., Ltd. (Lane and Macandrew)	Armstrong, Whitworth and Co., Newcastle	1899	London	335.7	45.9	28.6	3764	2424
Oscella	Anglo-American Oil Co.	D. J. Dunlop and Co., Glasgow	1897	London	140.5	26.1	10.8	393	123
Ottawa (Ex. Elbruz)	Do. do.	Armstrong, Whitworth and Co., Newcastle	1888	London	309.5	40.4	28.2	2742	2074
Ouady	Ned. Indische Ind. Maats.	Lobnitz and Co., Renfrew	1884	Moeara Djowa	134.7	25.4	13.1	364	164
Oural (Ex. Hans Kurt)	Soc. Anon. d'Armement d'Industrie, etc.	Armstrong, Whitworth and Co., Newcastle	1887	Antwerp	270.0	39.0	21.2	2210	1549
*Ousin Manafoff	M. S. Manafoff	Do. do. do.	1897	Astrakhan	218.3	32.0	15.7	1110	804
Paddy	Caspian Co., Ltd.	W. Dobson and Co., Newcastle	1903	Baku	248.0	32.0	17.5	1295	755
*Palembang	Bataafsche Pet. Maats.	Neder. Schps. Maats., Amsterdam	1905	Pangkalan	241.0	41.9	18.7	1856	1062
Paraguay	Sun Co.	American S. B. Co., Lorain, O.	1900	Philadelphia	242.0	42.0	26.5	2201	1323
*Pascha Dadascheff	A. A. Dadascheff	Kockums, M. V. Aktieb, Malmo	1894	Baku	245.2	27.7	18.8	1134	676
Paul Paix	Lennards' Carrying Co., Ltd.	R. Craggs and Sons, Middlesbro'	1908	Middlesbro'	355.2	49.4	25.7	—	—
Paula	Deutsche-Amerik. Pet. Ges.	Armstrong, Whitworth and Co., Newcastle	1888	Hamburg	283.1	40.3	30.2	2703	1721
*Pectan	Anglo-Saxon Petroleum Co.	W. Gray and Co., W. Hartlepool	1902	London	471.0	55.0	32.9	7291	4752
Pennoil	Pennsylvania Trading Co.	Greenock and Grangemouth D. Co.	1903	Hamburg	363.8	50.1	27.5	4434	2819
*Perlak	Bataafsche Pet. Maats.	Maats. Feyenoord, Rotterdam	1904	Pangkalan	242.0	42.0	18.7	1864	1087
Petrolea	C. V. F. Holm	Kjobn Hvns Flydk and Skbs, Copenhagen	1904	Copenhagen	155.9	27.9	12.0	480	231
Petrolea	Deutsche Pet. Verkauss. Ges.	L. Zobel, Bromberg	1905	Hamburg	116.2	21.9	10.1	197	111
Petroleum	The British Admiralty	Swan, Hunter and Co., Newcastle	1903	London	370.8	48.7	29.3	4686	3055
Phoebus	Deutsche-Amerik. Pet. Ges.	D. J. Dunlop and Co., Glasgow	1903	Hamburg	420.0	53.2	29.1	6268	3638
*Pinna	Petroleum SS. Co., Ltd.	Armstrong, Whitworth and Co., Newcastle	1901	London	420.8	52.1	32.2	6288	4100
Prudentia	Lennards' Carrying Co.	Palmers' Co., Newcastle	1889	Middlesbro'	312.0	40.2	19.8	2781	1770
Purelight	Pure Oil Co., New jersey	Greenock and Grangemouth D. Co.	1908	Hamburg	370.0	51.0	27.3	4430	2800
Puschkin	M. M. Berne and Co.	Kockums, M. V. Aktieb, Malmo	1893	Baku	245.3	27.4	18.8	1091	675
*Rasoul	M. Rasouloff	Armstrong, Whitworth and Co., Newcastle	1897	Baku	218.0	32.0	14.8	1057	661
Rhamses	Ned. Indische Ind. Maats.	Lobnitz and Co., Renfrew	1884	Balek Pappan	134.1	25.0	11.1	365	164

* Denotes the Vessels fitted for burning Liquid Fuel.

LIST OF VESSELS CARRYING PETROLEUM IN BULK.—STEAMERS—*Continued.*

Name of Vessel.	Owners.	Builders.	When Built.	Port of Registry.	Dimensions.			Tonnage.	
					Length.	Breadth.	Depth.	Gross.	Net.
Rion	Rion SS.Co.,Ld(Stephens,Sutton & Stephens)	Palmers' Co., Newcastle	1889	Newcastle	279.0	37.7	19.1	2185	1419
*Rocklight	Petroleum SS. Co. Ltd. (Lane & Macandrew)	Oswald Mordaunt, Southampton	1889	London	312.0	40.4	21.1	3284	2133
*Roma	Union SS. Co	J. L. Thompson and Sons, Sunderland	1889	New York	316.0	40.6	20.8	2939	2164
*Romany (Ex. Rossija)	Anglo-Saxon Petroleum Co.	Armstrong, Whitworth and Co., Newcastle	1902	London	350.0	47.0	27.6	3983	2579
*Rosecrans(Ex.Colombi Ex. Methven Castle)	Associated Oil Co.	Barclay, Curle and Co., Glasgow	1883	San Francisco	335.0	38.2	27.2	2681	1719
Rotterdam	American Petroleum Co.	Palmers' Co., Newcastle	1895	Rotterdam	360.0	46.7	27.7	4140	2635
Roumanian	Petroleum SS. Co.	Armstrong, Whitworth and Co., Newcastle	1908	London	385.0	51.0	27.6	4920	3093
Russian Prince	Prince Line Ltd.	Do., do. do. do.	1888	Newcastle	310.0	40.4	28.3	2716	2102
*Sabine Rickmers	Ned. Indische Ind. Maats.	Rickmers A.G., Geestemunde	1894	Batavia	200.0	30.6	20.9	950	573
Said	Do. do.	Lobnitz and Co., Renfrew	1884	Balek Pappan	133.7	25.2	10.3	344	170
*Sala-Hadji (Ex. Astral)	Bataafsche Pet. Maats	Palmers' Co., Newcastle	1889	Pangkalan	281.0	38.2	18.3	2280	1471
*Samarkand	A. A. Dadascheff	Armstrong, Whitworth and Co., Newcastle	1897	Baku	217.8	32.0	16.0	1157	738
Samed Aga	A. Iskenderoff	Lindholmens, M.V., Gothenburg	1903	Baku	215.3	31.5	17.0	1011	545
*San Cristobal	S. Pearson and Son, Ltd.	Armstrong, Whitworth and Co., Newcastle	1906	London	258.0	46.2	18.2	2041	1280
*Santa Maria	United SS. Co.	American S.B. Co., Cleveland	1902	New York	430.0	43.7	29.4	5318	3346
*Santa Rita	Do. do.	Do. do.	1902	New York	430.0	43.7	29.4	5273	3862
Saranac	Anglo-American Oil Co., Ltd.	W. Gray and Co., Ltd., West Hartlepool	1908	West Hartlepool	386.0	51.7	30.0	5316	3354
*Saruchan	M. Saruchanoff	G. Seebeck A.G., Bremenhaven	1898	Baku	182.0	26.9	12.8	723	434
Saxoline	Saxoline SS. Co., Ltd. (Hunting and Son)	Armstrong, Whitworth and Co., Newcastle	1899	Newcastle	335.7	45.0	28.5	3757	2426
Seminole	Anglo-American Oil Co.	Furness, Withy and Co., West Hartlepool	1903	Newcastle	400.6	52.2	30.8	5864	3797
Serapeum	Ned. Indische Ind. Maats.	Lobnitz and Co., Renfrew	1884	Balek Pappan	134.8	25.2	13.1	368	166
Servian	Petroleum SS. Co. (Lane and Macandrew)	Sir J. Laing and Sons, Sunderland	1908	London	385.0	51.0	27.7	4997	3134
Sevan	St. Petersburg Co., Nadeshda	Boolds, Sharer and Co., Sunderland	1886	Baku	148.0	27.1	12.2	569	318
*Singu	Burma Oil Co., Ltd.	Armstrong, Whitworth and Co., Newcastle	1903	Rangoon	309.5	41.5	20.5	3037	1912
Snowflake	Bear Creek O. and S. Co., Ltd.	Do. do. do.	1893	Liverpool	294.0	39.6	19.8	2710	1726
*SoyoMaru Ex.Hermoine	Toyo Kaisen Kaisha	Do. do. do.	1906	Tokio	370.0	48.5	28.7	4519	2904
*Spondilus	Anglo-Saxon Petroleum Co., Ltd.	W. Gray and Co., Ltd., West Hartlepool	1903	London	471.0	55.0	32.9	7291	4752
Standard	Deutsche-Amerik. Pet. Ges.	Armstrong, Whitworth and Co., Newcastle	1890	Hamburg	308.7	40.2	28.3	2730	1748
*Strombus	Anglo-Saxon Petroleum Co., Ltd.	Do. do. do.	1900	London	410.0	52.1	32.2	6148	4008
Suez	Ned. Indische Ind. Maats.	Lobnitz and Co., Renfrew	1884	Balek Pappan	134.1	25.0	11.1	365	164
Suleiman Ousjenoff	M. B. H. Ousjenoff	Lindholmens, M.V., Gothenburg	1895	Baku	285.2	35.0	17.8	1604	991
*Sultan van Koetei	Bataafsche Pet. Maats.	Ned. Schps. Maats., Amsterdam	1904	Pangkalan	241.0	41.9	18.7	1855	1061
*Sultan van Langkat	Do. do.	Sir J. Laing, Sunderland	1898	Pangkalan	335.0	39.5	15.5	3035	2308
Suram	Suram SS. Co., Ltd.	Do. do.	1893	Newcastle	325.0	42.6	21.2	3629	2338
Suwanee	Anglo-American Oil Co., Ltd.	Armstrong, Whitworth and Co., Newcastle	1888	London	310.0	40.4	28.3	2736	2075
Sviet	Merkulieff	Matala Co., Gothenburg	1885	Odessa	275.5	36.0	23.5	1815	965
*Syriam	Burma Oil Co., Ltd. (1902)	Grangemouth Dockyard Co.	1899	Rangoon	235.0	32.6	15.9	1427	891
Tamarac	Anglo-American Oil Co., Ltd.	Napier and Millar, Ltd.	1908	Glasgow	384.6	51.7	28.2	5100	—
Tatjana	C. Toumajef	Bergsunds, M.V. Aktieb	1898	Baku	276.5	32.1	18.8	1584	1242
*Telena	Anglo-Saxon Petroleum Co., Ltd.	W. Gray and Co., Ltd.	1895	London	375.5	48.0	29.8	4778	3124
Terek	Petroleum SS. Co., Ltd.	Sir J. Laing and Sons, Sunderland	1899	London	335.5	45.0	28.1	3710	2374
Texas	The Texas Co.	Newport News S.B. and D.D. Co.	1908	Port Arthur	397.0	52.0	30.0	4900	—

* Denotes the Vessels fitted for burning Liquid Fuel.

LIST OF VESSELS CARRYING PETROLEUM IN BULK.—STEAMERS—*Continued.*

Name of Vessel.	Owners.	Builders.	When Built.	Port of Registry.	Diamensions.			Tonnage.	
					Length.	Breadth.	Depth.	Gross.	Net.
Tiflis	Soc. Anon. d'Armement d'Industrie, etc.	Armstrong, Whitworth and Co., Newcastle	1900	Antwerp	305.0	40.0	25.3	2783	1845
*Timsah	Akties det Ostasiastiske Compagnie	Lobnitz and Co.	1884	Copenhagen	134.0	25.4	11.1	327	134
Tioga	Anglo-American Oil Co., Ltd.	Burmeister and Wain, Copenhagen	1890	London	276.7	38.0	25.7	2197	1378
Toledo	Sun Co.	S. B. Craig and Co., Toledo	1902	Philadelphia	250.5	42.0	25.5	2227	1868
Tonawanda	Anglo-American Oil Co., Ltd.	Armstrong, Whitworth and Co., Newcastle	1893	London	330.0	42.7	28.4	3416	2183
Tora Maru	K.-Kiyo-Oka	Osaka Iron Works	1907	Osaka	184.4	27.1	11.3	567	351
Toussoum	Nederl. Indische Ind. en Handels Maats.	Lobnitz and Co.	1884	Moeara	134.8	25.1	13.1	362	163
*Trigonia	Ned. Indische Tankstamboot Maats.	Armstrong, Whitworth and Co., Newcastle	1898	Batavia	242.0	40.2	17.3	1667	1069
*Trocas	Anglo-Saxon Petroleum Co., Ltd.	Sir J. Laing and Son	1893	London	347.5	45.7	27.3	4129	2657
Tuscarora	Anglo-American Oil Co., Ltd.	Do. do.	1898	Sunderland	420.4	53.2	29.1	6117	3925
*Twingone	Burma Oil Co., Ltd.	Armstrong, Whitworth and Co., Newcastle	1902	Rangoon	350.0	36.5	16.8	1770	1120
*Vardan Zoravar	A. A. Dadascheff	W. Dobson and Co.	1894	Astrakhan	149.9	28.0	14.5	543	380
Vedra	European Petroleum Co., Ltd.	Sir J. Laing and Sons, Sunderland	1893	London	345.0	44.7	22.0	4057	2622
*Venture	A. Fregl	Caledon S. B. and E. Co.	1899	Baku	284.3	32.0	18.9	1387	853
*Volute	Anglo-Saxon Petroleum Co., Ltd.	W. Gray and Co., W. Hartlepool	1893	London	347.0	45.6	26.7	4006	2599
*Vorotan	A. Pogosoff and Co.	W. Dobson and Co., Newcastle	1894	Liban	148.5	28.1	13.3	543	433
W. Lindberg	Soc. Com. et Indust. de Naphte "Mazout"	W. Lindbergs, Aktieb, Stockholm	1893	Baku	238 6	28.6	16.3	1119	654
*W. S. Porter	Associated Oil Co.	Newport News S. B. and D. D. Co.	1907	San Francisco	385.0	49.7	28.7	4902	3525
Washington	Deutsche-Amerik. Pet. Ges.	Act. Ges. "Vulkan"	1894	Hamburg	354.3	45.1	30.1	4171	2659
*Washtenaw	Union SS. Co.	W. Gray and Co., W. Hartlepool	1887	New York	315.3	42.6	25.0	2897	2004
Weehawken	Anglo-American Oil Co., Ltd.	Armstrong, Whitworth and Co., Newcastle	1891	London	310.0	40.2	28.2	2784	2101
*Whittier	Union Transportation Co.	Union Iron Works,	1903	San Francisco	240.0	32.0	17.5	1296	798
Willkommen	Deutsche-Amerik. Pet. Ges.	Armstrong, Whitworth and Co., Newcastle	1887	Hamburg	315.0	41.2	23.8	3140	1999
*Winifred	J. M. Guffey Petroleum Co.	Bath Ironworks	1898	Port Arthur	282.5	42.2	21.1	2551	1520
Winnebago	Anglo-American Oil Co., Ltd.	Armstrong, Whitworth and Co., Newcastle	1901	Liverpool	360.0	49.7	28.7	4534	2965

* Denotes the Vessels fitted for burning Liquid Fuel.

SAILING VESSELS.

Name of Vessel.	Owners.	Builders.	When Built.	Port of Registry.	Length.	Breadth.	Depth.	Gross.	Net.
Alembic	Burt, Boulton and Haywood, Ltd.	W. Dobson and Co., Newcastle	1894	London	122.5	24.1	13.1	255	219
Alice Isabelle	Refineries de Gramont, H. Prentout-Leblond and E. Leroux	Cie Générale Transatlantique, St. Nazaire	1893	Sables d'Olonne	181.7	31.6	17.3	739	577
Augusta	Sydvenska Petroleum Aktiev	Lindholmens Verks. Akt., Gothenburg	1903	Malmo	98.4	22.0	11.8	212	202
Calcutta	Anglo-American Oil Co.	Naval Con. and Arm. Co., Ltd., Barrow	1892	London	248.8	40.2	21.9	1694	1578
Coaltar	Burt, Boulton and Haywood, Ltd.	Thames Iron Works, Ltd., London	1893	London	109.0	24.0	12.8	219	195
Conemaugh	J. M. Guffey Petroleum Co.	Troyden and Sons, Liverpool	1879	Port Arthur	254.0	40.5	24.3	1774	1714
Conneaut, Ex. Lone Star	Do. do.	Harland and Hollingsworth Co. Del.	1875	Port Arthur	280.0	38.1	20.2	1690	1620
France Marie	A. Vimont and Cie	Forges and Cie and de la Medit, Havre	1900	Marseilles	250.0	40.0	23.5	1994	1673
Fullerton	Mission Transport and Refining Co., Ltd.	Hay and Wright, Alameda	1902	Los Angeles	235.0	42.5	19.5	1554	1494
Gusher	Higgins Oil and Fuel Co.	Weever and Sons, Texas	1902	Galveston	185.0	33.0	15.0	533	481

LIST OF VESSELS CARRYING PETROLEUM IN BULK.—SAILING VESSELS—*Continued.*

Name of Vessel.	Owners.	Builders.	When Built.	Port of Registry.	Dimensions.			Tonnage.	
					Length.	Breadth.	Depth.	Gross.	Net.
Hainaut	American Petroleum Co.	S.B. Barrow Co., Barrow	1887	Rotterdam	248.8	40.3	22.2	1783	1734
Jules Henry	A. Vimont and Cie.	Forges and Cie de la Medit., Havre	1900	Marseilles	250.0	40.0	23.5	1994	1673
Marion Chilcott (Ex. "Kilbrannan")	Associated Oil Co.	Russell and Co., Glasgow	1884	San Francisco	256.4	38.2	22.8	1738	1511
Navahoe	Anglo-American Oil Co., Ltd.	Harland and Wolff, Ltd., Belfast	1908	Belfast	450.2	58.3	31.2	7718	6970
No. 1	Standard Oil Co.	Maryland Steel Co., Sparrows Pt., Md.	1904	New York	159.6	30.0	12.5	1120	1059
No. 1	H. N. Andersen	Kiöbenhavns Flydk Skbsv., Copenhagen	1903	Copenhagen	72.1	20.5	7.3	93	83
No. 2	Standard Oil Co.	Maryland Steel Co.	1904	New York	159.6	30.0	12.5	500	—
Progresso Argentino	Cia. Nicional de Acertes	Grangemouth Dockyard Co.	1893	Buenos Aires	171.7	31.1	15.0	665	636
Quevilly	H. Prentout-Leblond and E. Leroux	Laporte and Cie., Rouen	1897	Rouen	322.0	45.5	24.2	3272	2518
Rendova	Lever Bros., Ltd.	Napier and Millar, Ltd.	1907	Liverpool	231.1	37.2	21.0	1432	1295
Rudolph	Colonial Oil Co.	Acties. Burmster. and Wains Msk. og. Skbs. Copenhagen	1898	Lisbon	108.7	23.1	11.5	198	163
S. O. Co. No. 3	Standard Oil Co. (Cal.)	A. Sewall and Co., Bath, Me.	1902	New York	280.1	45.4	23.4	2473	1857
S. O. Co. of N.Y. No. 56 (Ex. Str. Standard)	Standard Oil Co.	——— Chester, Pa.	1888	New York	162.1	30.1	14.4	589	—
S. O. Co. of N.Y. No. 57	Do. do.	Delaware River I. S. B. and E. Co. Do.	1893	New York	241.5	37.0	18.0	1381	1310
Do. do. No. 58	Do. do.	Do. do. do. Do.	1893	New York	249.0	37.0	20.0	1644	1600
Do. do. No. 76	Do. do.	American Steel Barge Co., W. Superior, Wis.	1895	Chicago	175.0	33.1	15.5	794	780
Do. do. No. 81	Do. do.	Union Drydock Co., Buffalo, N.Y.	1897	New York	254.0	40.5	23.0	1775	1402
Do. do. No. 86	Do. do.	American Steel Barge Co., W. Superior	1899	New York	208.7	38.1	16.0	1102	954
Do. do. No. 91 (Ex. Loyalty)	Do. do. (Cal.)	S. B. Superior Co. Do.	1900	San Francisco	246.5	42.0	21.2	2019	1851
Do. do. No. 92	Do. do.	Burlee Drydock Co., Port Richmond, N.Y.	1903	New York	302.4	43.3	28.6	3248	3044
Do. do. No. 94	Do. do.	S.B.Townsend, Downey & Co., Shooter Is., do.	1903	New York	360.5	50.0	27.0	4167	3934
Do. do. No. 95	Do. do.	Do. do. do. Do.	1903	New York	360.5	50.0	27.0	4167	3939
San Ignacio de Loyola	L. Mercader y Vda de Londaiz	Craig, Taylor and Co., Stockton	1893	San Sebastian	173.0	31.1	15.2	625	605
Santa Paula	Mission Transport and Refining Co.	——— Fairhaven, Cal.	1900	Los Angeles	183.1	30.3	16.4	650	632
Scandinavia	W.H. Muller & Co.'s Algem'e Scheep. Maat.	Naaml. Ven Werf. v Rijkee & Co., Rotterdam	1905	Rotterdam	164.0	27.3	11.9	461	279
Shenango	J. M. Guffey Petroleum Co.	Bath Iron Works Bath, Me.	1903	Port Arthur	298.0	44.8	21.9	2365	1824
Sonoma	Transport Oil Co.	Pierce and Michael, Chelsea, Mass.	1868	San Francisco	177.5	36.2	22.4	1063	998
Spindletop	Higgins Oil and Fuel Co.	Weever and Sons, Orange, Tex.	1902	Galveston	156.0	31.0	11.0	389	382
Sunlight	Lever Bros., Ltd.	Napier and Millar, Ltd.	1907	Liverpool	230.9	37.2	21.0	1433	1298
Tres Macs	Colonial Oil Co., (J. M. da Silva Telles)	H. Parry and Son, Libson	1905	Lisbon	90 0	18.0	10.0	163	111
Ville de Dieppe	Acties. Union (Jens Pay)	Oswald Mordaunt and Co., Southampton	1888	Christiana	217.2	36.4	21.0	1254	1228
Zeelandia	Maats. Zeelichter Zeelandia (Ph. van Ommeren)	Rotterdmsche Droogdok Maats., Rotterdam	1906	Rotterdam	164.3	31.3	12.7	591	545

RUSSIAN NOTES.

Confirmation of Concessions.—Nobel Bros. have received from the Ministry of Agriculture and Domains the documents relating to the concessions on plots Nos. 7, 22 and 26, on Holy Island, near Baku.

A Good Move.—The question of creating special courses of lectures on petroleum, at the Donskoi Polytechnic School and the Mining Institute at Ekatermoslav, is now being considered by the Mining Committee in St. Petersburg.

A Link with the Past.—The kerosene and lubricating oil refinery of Halperin (late Ragosine), in Black City, which lately passed into the hands of Mr. G. N. Seidoff, has been definitely closed and is now being pulled down.

Increasing Interest in Uchta.—It is reported, from Vologda, that local interest in the Uchta oil fields is on the increase. Lately, 40 fresh claims on oil lands have been filed, the majority of which were filed by representatives of the Northern Uchta Petroleum Co.

Liquid Fuel and Railways.—According to statistics compiled by the Vladicaucasian Railway the quantity of liquid fuel purchased by all the Russian railways in 1908 was 60,000,000 poods. On the 1st of January there was left a balance of 2,535,000 poods, so that the quantity consumed during the year was about 57½ million poods.

Putting their House in Order.—The seventeenth meeting of the Baku Petroleum Association was opened at Baku on the 25th of January, Mr. K. F. Ruzevitch, Chief of the Mines Bureau of the Caucasus, being in the chair. Up to the time of writing, only matters affecting the management of affairs and internal organisation of the association were discussed.

A New Company.—A company has been formed in Russia, under the title of the Neva Petroleum Co., for the purpose of prospecting for and producing petroleum in the Baku district and elsewhere. The founders are Lieut-General Golostchapoff, Mr. V. T. Milschitz, and Mr. V. M. Abaza. The nominal capital is 1,000,000 roubles. The head office will be in St. Petersburg.

Grosny Conference.—The thirteenth meeting of the Grosny petroleum producers will open on the 28th of February at Grosny. Apart from the question of routine the following matters will be discsused:—(1) Placing Grosny petroleum concessions on the same footing as the Baku concessions, *i.e.*, the period to be till worked out and no royalty to pe charged on oil used as fuel at the wells; (2) Lowering of the rate for transport of oil from Grosny to Petrovsk, and thus give Grosny oil an outlet to the Caspian Sea.

Fees for Petroleum Permits.—The Russian Ministry of Commerce and Industry has fixed the following fees for permits to prospect for petroleum in 1909:—(1) For European Russia (with the exception of the Provinces of Archangel, Vologda and Perm), the Caucasus and Tcheleken Island, 5 roubles per dessatine; (2) for the Transcaspian and Ferghana Provinces, and the Provinces of Archangel and Vologda, 3 roubles per dessatine; (3) for the rest of Central Asia, 2 roubles per dessatine, and (4) for Siberia and the Province of Perm, 1 rouble per dessatine.

ROUMANIAN NOTES.

Opening up a New Field.—The prospecting borehole which Messrs. Feodor Siegel, of Schonebek, Germany, are drilling for Mr. Bernstein, at Copaceni, has, at a depth of 400 metres, revealed a stratum of oil-bearing sand.

Oil Exports in 1908.—According to preliminary figures to hand, the total exports of petroleum products from Roumania, in 1908, amounted to 460,705 tons, against 426,604 tons exported in 1907, or an increase of 34,101 tons.

Prospecting at Margineni.—The Astra Co. has started a prospecting borehole on its property at Margineni-de-Jos, situated between Filipesti-de-Padure and Moreni. This property is held on a concession from Mr Georgesco, who owns the freehold of it.

A Well-merited Honour.—King Carol I. of Roumania has conferred the Order of the Roumanian Crown on Mr. Anton Raky, the celebrated boring engineer, who was the originator of the Regatul Roman Co., now the second largest producing firm in Roumania, and was also the first to develop the Moreni field, now the second largest producing field in Roumania.

A Welcome Discovery.—The Concordia Co., having deepened its well, No. 183, at Burloi, by 12 metres, struck a new and and prolific oil stratum at 164 metres, which is considered of great importance. The oil from the second stratum is of a green colour, and similar in character to Campina oil. The oil flows over the casing, and occasionally spouts up to a height of 5–6 metres.

The Speranta Co. has published its accounts for the financial year ended 31st October, 1908. These shew a gross revenue for the year of 366,000 francs, of which 340,917 francs represents sales of oil. After deducting 51,795 francs for management and sundry expenses, there is left a net profit of 314,210 francs. The share capital of the company is 1,456,000 francs, whilst the properties are valued at 1,324,915 francs.

A Growing Production.—The crude oil production in Roumania, after passing through a period of stagnation, is now showing a tendency to grow, and it is expected that the great boring activity which has lately prevailed in the Roumanian oil fields will, in the next few months, result in a substantial increase in production. In the meantime, the price of crude oil remains firm, on the same high level at which it has been standing for practically a whole year.

Progress at Moreni.—Well No. 3 of the Moreni Co., situated near Mr. Campeanu's borehole, and which is being drilled under contract by the Alliance Boring Co., has reached a depth of 200 metres and found slight traces of oil. This well is, however, not expected to yield any substantial results before 600 metres is reached. Into Mr. Campeanu's well a 6-inch column of casing is now being lowered in order to commence baling. The Regatul Roman Co. and the Romano-American Co. are both getting a good production, whilst the yield of well No. 7 of the Astra Co. has fallen off.

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LATEST QUOTATIONS OF PETROLEUM SHARES.

ENGLISH COMPANIES.

This list is restricted to companies who have paid dividends or who are producers.

Company.	Capital Paid Up.	Value of Shares.	Latest Prices.
Assam Oil	£205,000	£1	16/6-17/6
Baku Russian Petroleum ..	£750,000 Ord.	£1	0/3-0/9
,, ,, ..	£650,000 5½% Pref.	£1	6d.-1/0
Bibi-Eybat Petroleum Co. ..			6/0-7/0
Californian Oilfields	£385,000 Ord.	£1	5¼-5½
Commonwealth Oil Co. Pref	fully paid (Prem.)		⅝-¾
,, ,, Def..	£1 fully paid		$\frac{11}{16}$-$\frac{13}{16}$
European Petroleum.. ..	£550,000 Pref.	£1	1/0-2/0
,, ,, ...	£550,000 Ord.	£1	0/3-0/9
,, ,, ...	£376,000 Deb.	£100	66-70
Russian Pet. & Liquid Fuel ..	£500,000 6½% Pref.	£1	2/6-3/6
,, ,, ...	£600,000 Ord.	£1	2/0-3/6
Schibaieff Petroleum ..	£575,000 6% Pref.	£5	$\frac{3}{16}$-$\frac{5}{16}$
,, ,, ...	£575,000 Ord.	£1	0/6-1/0
Shell Transport & Trading ..	£2,000,000	£1	49/0-50/0
,, ,, ,, ..	£1,000,000 Pref.	£10	$10\frac{13}{16}$-$\frac{15}{16}$
Spies Petroleum Company ..	£387,500	10s.	10/6-11/0

RUSSIAN COMPANIES.

Company.	Nom. Value in Roubles.	Quotations on Feb. 8th.	
		Lowest Roubles.	Highest Roubles.
Baku Naphtha Co.	100	316	318
,, ,, ,, (issue of 1908) fully pd.	100	280	283
Balakhany Naphtha Co.	250	—	—
Caspian Society	1,000	3,850	3,900
Mazout Co.	250	—	—
Melikoff, A. C.	250	—	—
Mirzoeff Bros.	250	—	—
Naftalan Co.	250	—	—
Naphtha Co. "Kavkas"	250	—	—
Naphtha Trading Co., A. I. Mantacheff & Co.	250	128	129
Neft Co.	250	—	—
Nobel Bros.	5,000	10,475	10,525
,, ,, ...	250	—	—
Rops and Co. V...	250	—	—
Russian Naphtha Co.	250	—	—
Society Mazout	250	—	—
Ter-Akopoff Co.	250	—	—
Tumaieff & Co., J. G.	250	—	—
Volga-Caspian Naphtha and Trading Co	250	—	—
,, ,, ,, (Second Issue)	250	—	—

SCOTCH COMPANIES

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Company.	Capital Paid Up.	Value of Share.	Latest Prices.
Broxburn Oil Co., Ltd., Ord. 17/- pd	£235,000	£1	£2 5s. 6d.
Do. 6% Cum. Pref. ..	£100,000	£10	£12 8s. 9d.
Burmah Oil, Ord.	£1,100,000	£1	£4 19s. 6d.
Do. Pref.	£250,000	£1	£12 2s. 6d.
Dalmeny Oil Co., Ord. (7 paid) ..	£37,800	£8 10s	£5 0s. 0d.
Do. 5% Pref. ..	£18,900	£7	£4 12s. 0d.
Lobitos Oilfields, Ltd. (£1).. ..	£275,000	£1	£1 4s. 10½d.
Oakbank Oil Co., Ltd., Ord.	£170,000	£1	£1 18s. 9d.
Do. Pref. (fully paid)	£36,980	£1	£1 4s. 6d.
Do. Do. (10s. paid)	£63,020	£1	£0 18s. 3d.
Pacific Oilfields, Ltd. (£1)	£200,000	£1	£1 3s. 4½d.
Pumpherston Min. Oil Co., Ld., Ord. (17s. paid)	£110,500	17s.	£12 0s. 0d.
Do. 6% Cum. Pref.	£100,000	£10	£14 0s. 0d.
Tarbrax Oil Co., Ltd. Ord. (£1 pd.)	£38,350	£1	£2 19s. 0d.
Do. 6% Cum. Pref.	£35,000	£1	£1 4s. 9d.
Young's Paraffin Co., Ltd., Ord. ..	£452,808	£4	£3 15s. 3d.
Do. "B" Deb...	£150,000	£100	£175 10s.

DUTCH COMPANIES.

Company.	Latest Quotations (per cent.)	Florins
Arnhemsche Petroleum Mij.	38	1,000
Aurora ,, ,, (Deb. 5%)	78	—
Campina Poiana Mij.	—	—
Dordtsche Petroleum Mij. (Pref.)	164	—
,, ,, ,, (Ord.)	150½	50
,, ,, ,, (Deb. 4½%)	102¼	1,000
Gaboes	—	—
Holl. Rumeensche Petroleum Mij.	70	1,000
Int. Rum. Pet. Mij.	21	500
Java Petroleum Mij. (Ord.)	14	1,000
,, ,, ,, (Pref.)	38½	—
Koninklyke Nederl. Pet. Mij. Shares	374	100
,, ,, Share certificates	373	1,000
Mœara Enim Petroleum Mij.	163¼	100
,, ,, 1-1,000 Oblig. 5	—	250-1,000
"Moesi Ilir" Petroleum Mij.	—	—
Nederl.-Rumeensche Petroleum Mij.	4½	—
Nieuwe Ned. Petroleum Mij. And.	—	1,000
Oklahoma Petroleum Co.	109	—
Oliebronnen in Hannover Mij. (Deb.) ..	82	—
Panolan Maatschappij Cert.	260	—
Perlak Petrol. Mij. (6% cum. pr. A.)	139⅛	1,000
,, ,, (Common)	—	—
Sumatra-Palembang Petroleum Mij	140⅝	500
Tarakan Petrol Mij.	$31\frac{9}{61}$	—
Zuid Perlak Petrol. Mij. (Pref.)..	137	—

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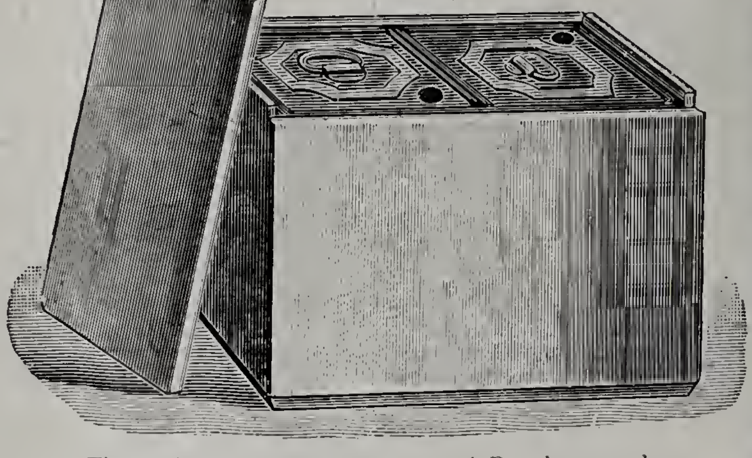

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THE
PETROLEUM REVIEW,
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American Office: 150, Nassau Street, New York.

Saturday, February 13, 1909.

OUR TENTH ANNIVERSARY.

TO-DAY the Review celebrates its tenth anniversary, and the current issue is, I trust, worthy of so auspicious an occasion, bearing ample evidence of the headway which the journal has made since its *debut* before the members of the petroleum industry in the middle of February, 1899.

My mind goes at once back to the time when, having decided that the petroleum industry was greatly in need of a serious publication, I launched the Review. I admit that the establishing of a petroleum journal in this country where, for the most part the practical side of petroleum production is unknown, was a very hazardous enterprise, and though my barque was launched under auspices which I considered very favourable, many dangerous seas were ahead, and it was only by steering straight that the Review to-day occupies such an enviable position.

These last ten years have been full of life and movement, and the history which they have written for themselves is indeliably stamped upon my mind. The petroleum industry, as yet in its infancy when the Review was established, has expanded in a manner the most optimistic could have never imagined. The crude oil production alone has increased nearly threefold, and with this it naturally follows that in every direction there has been substantial growth. At the time when the Review was first issued, those great producing territories in the Far East were practically unknown, Roumania's vast petroliferous wealth was lying dormant, excepting that which was obtainable by the primitive type of hand-dug wells, and in America, the intervening forty years since Colonel Drake drilled his memorable well, had witnessed very little progress, when compared to that which has since been achieved.

The transport of petroleum, too, was a subject whose real difficulties had to be surmounted. Both in America and in Russia the problem was very serious, for it was necessary that in order to cultivate a substantial export trade, hundreds, and in some cases, thousands of miles had to be traversed before tidewater could be reached. The old system of tank cars on the railways was cumbersome, and at the best very unsatisfactory, while it was impossible by that method to export large quantities either of the crude oil or the refined products. Then the trunk pipe lines came along, and with these a new page of progress opened before the petroleum industry of the world. Tens of thousands of miles of pipe lines were laid in the United States, and fields far distant from the coast were soon linked up with the refineries at the export ports. Then, too, the bulk sea transport became more general, though the trade of oils in barrels died hard. One by one, oil tankers of ever increasing size were launched, and so did the hand of evolution and progress work its changing influence upon the world's petroleum industry.

As I look back, I am not unmindful of the great part which science has played in the permanent expansion of the petroleum industry, and my candid opinion to-day is that, had it not been for the great assistance which the industry has received from many well-known scientists, who have spent years and years of careful study in regard to those subjects so closely allied to the production and refining of petroleum, the industry would have fared badly.

But the industry has received help in other directions, and the important part which has been played by our great commercial houses, whether in the production, refining, or distribution of petroleum products, cannot be forgotten, or even overlooked. And therefore it is that the industry continues to expand. New uses are constantly being found for the many products of petroleum, and each of these add substantially to the progress which, in quite an unostentatious manner, is being made in every part of the world.

Under such circumstances, it is to me no small surprise that the Review has grown and prospered with the industry with which its interests are so closely associated. It has always been my endeavour to make its pages as interesting as possible, and, as my readers are well aware, I have always discharged what I have considered a public duty in commenting upon various companies operating in the world's oil fields, to deal with matters and facts without fear or favour. At times the Review has been bitter in its attacks upon the management of more than one English petroleum company, yet in no instance have these outspoken criticisms been prompted by malice or ill-will, but those assailed have been regarded more in the light of trustees of public funds rather than as private individuals. It has always been with a certain amount of reluctance that I have taken up these fights, yet I trust my readers will acknowledge that my attitude throughout has been consistent, and my policy has been based upon what I have considered to be the best in the interest, not only of those who have invested capital in those concerns, but of the petroleum industry. Let us hope that, in times to come, the commercial side of the oil industry will not be dragged so low, but that the management of our public companies will be fair, square, and above board. If this be so, then I am confident the industry has nothing to fear, for my contention to-day is that there are far more profits to be made from the petroleum industry than have yet been taken out of it.

A word in conclusion. While thanking my large circle of subscribers and advertisers for their very cordial support in the past, I would also express my indebtedness to my many friends in all parts of the world, who have so regularly kept me informed upon all matters of interest, and thus kept the Review in the forefront of technological literature. My appreciation of the services of all who have liberally assisted me in the past will be seen by my continued efforts to not only maintain but to increase the standard of the Review, and make it even the more worthy of the position which it holds to-day as the recognised organ of the petroleum industry, the world over.

P. Dvorkovitz.

◆

THE TIN PLATE MARKET.

Messrs. Norton, Owen & Co., of 4, Bishopsgate Street Within, London, E.C., report under date February 11th, 1909, as follows: –

The market is very flat, with little business doing, and at the moment there are no signs of improvement. Prices remain practically unchanged as follows:—

IC	18¾ × 14	124 sheets	110 lbs.	11/9 to 11/10½	per box.
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THE OIL SHALE INDUSTRY OF SCOTLAND.

. . A Brief Retrospect. . .

Though it is impossible to give exact figures concerning the output of the several concerns operating in the oil-shale fields of the Lothains, it may be confidently asserted that the past year has been one of a fairly satisfactory nature, and not only from the point of view of the production of the shale and the retorting of the same, but from the profits received from the sale of the various valuable refined products, the year stands out as a good one.

As readers of the Review are doubtless aware, the oil-shale industry of Scotland is mainly confined in a belt of territory about six miles broad, which stretches from Dalmeny and Abercorn on the shores of the Firth of Forth, southwards across a tract between the river Almond and the Bathgate Hills to the moorland district of Cobbinshaw and Tarbrax, and this region embraces the mining centres of Broxburn, Calder, and Adiewell.

The industry has existed and developed in this belt for the past fifty years, during which time it has experienced many vicissitudes. At one time—it would be nearly forty years ago—there were no less than fifty companies working the shale deposits, or retorting the shale, but the total production of crude oil after retorting was by no means so large as is the case to-day. The advent of the Russian and American oils created severe competition with the Scottish oil shale industry, for the methods of production were at that time very expensive, being carried on in a very simple fashion. Sometimes the shale was carried miles to the retorts, and in its turn the resulting crude oil was carted miles to the refinery.

One by one the oil shale works began to drop out, and thirty years ago there were but eighteen of the fifty left. Ten years later the companies operating in the Lothians had dropped to thirteen, while in 1889 the number had further decreased, until to-day we find there are only six operating companies, and of these two produce the crude oil only, there being therefore but four refining companies, the Pumpherston, Young's, Broxburn, and the Oakbank.

Yet through all the years of evolution the Scottish shale-oil industry has held its own, and affords ample scope for the profitable employment of the capital invested. The existing oil works have been brought up to a state of practically perfect organisation and many economies, combined with greater efficiency, have been introduced.

General View of the Broxburn Works.

It may be taken as approximately correct that the total oil shale mined last year was a little under 3,000,000 tons, as against 2,700,000 tons for 1907, and from this about 70,000,000 gallons of crude oil were produced. Of the refined products, illuminating oil takes naturally the premier position, for about 19,000,000 gallons were received at the refineries during 1908 as compared with 18,800,000 gallons for 1907, this quantity going to satisfy the greater portion of the needs of Scotland for illuminating purposes.

For the other marketable products—gas oils, paraffin wax, sulphate of ammonia, etc., which are manufactured in large quantities—the market last year was not so favourable as formerly, and it is believed that this weakness may to some extent have effected profits. Taking the year, however, all round, those engaged in the Scotch shale oil industry have had nothing to grumble at.

THE GALIZISCHE KARPATHEN PETROLEUM GESELLSCHAFT.

OPERATIONS DURING 1908.

The Galizische Karpathen Petroleum Gesellschaft, as a result of operations during the past year, has to record an increase in its crude oil production. Various borings have struck oil on several plots, so that for the period from the 1st of May to the end of December, 1908, the company's crude oil production amounted to 111,286 tons, as against 48,144 tons produced in the corresponding period of 1907. The greater productivity of the wells has considerably lowered the proportionate cost of production. The freshly produced crude oil was only partly used up by the refineries, the remainder being stored, for when crude oil prices were at their lowest, the company bought crude oil from third parties. Since then the crude oil prices have stiffened as a result of the formation of the Galician Crude Oil Producers' Union, and are now about 13·20 kronen per ton. The 25th of February is named as the day when the Union will begin granting advances on crude oil at the rate of 14 kronen per ton.

The Karpathen Co. has again been compelled to write off the value of its stocks. The company has built near Maryampol a new reservoir for the storage of 30,000 tons of oil into which the company's tank waggon trains will deliver 10,000 tons of oil monthly.

The sales of the company's products have in the last eight months also increased, and represent a value of 1,244,000 kronen, against 1,139,000 kronen's worth sold in the same period of 1907. The business done by the company's engineering works, on the other hand, shews a shrinkage, in consequence of higher import duties hindering the imports of machinery into Roumania. At a certain time the company entertained the idea of erecting its own engineering works in Roumania, but later on gave up this idea, and instead decided to build new works at Maryampol.

It is naturally impossible at present to predict the results of the operations of the financial year, which is to end on the 30th April, but at the same time it may be noted that, so far, the company has to record gains against 1907, both in crude oil production and in sales of products, and these better results, provided nothing unforeseen happens, should render possible the distribution of a higher dividend than last year, which was 15 kronen per share.

TEMPORARY ADDRESS.

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PETROLEUM IMPORTS INTO THE UNITED KINGDOM DURING JANUARY.

THE SHIPMENTS INTO VARIOUS PORTS.

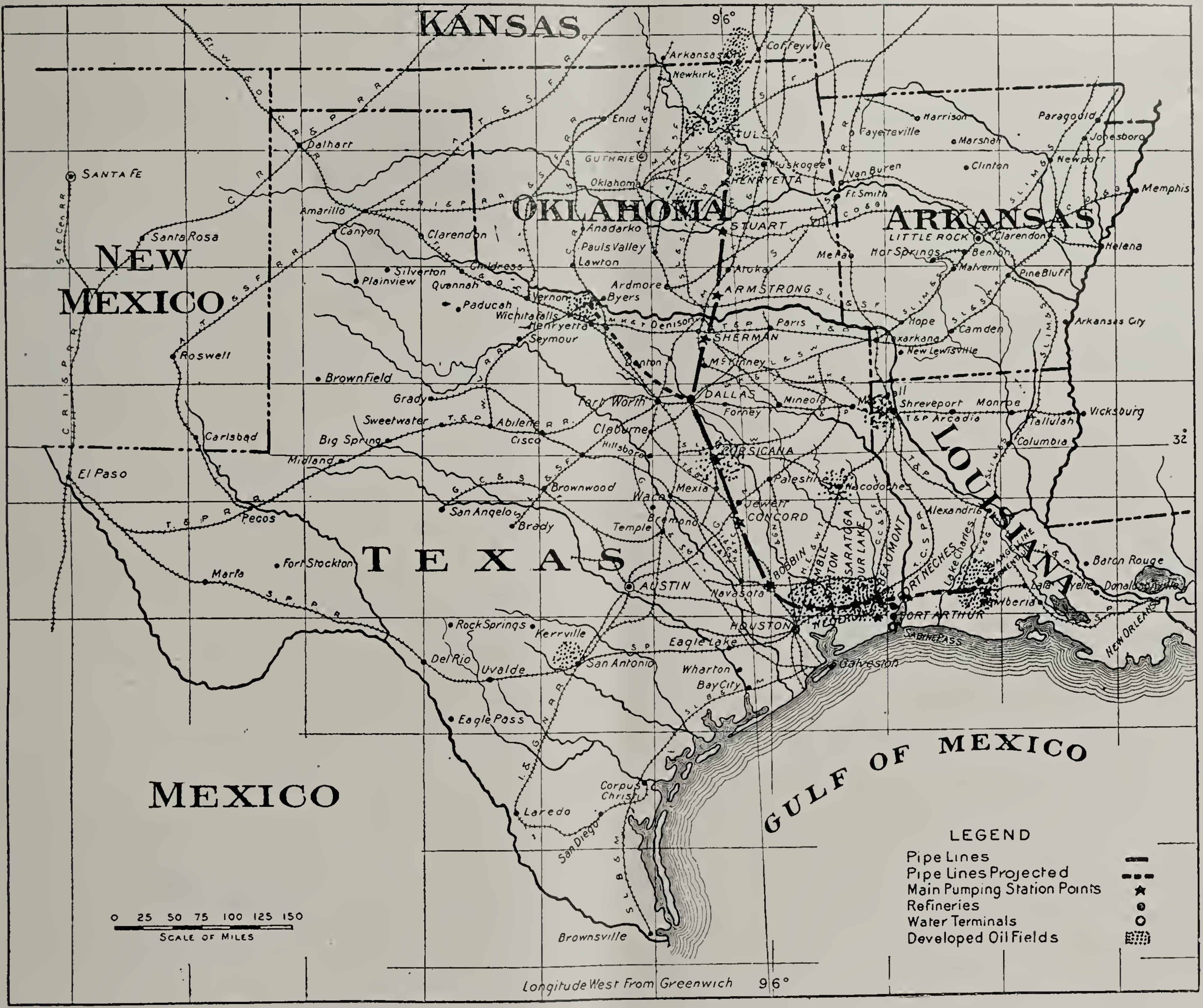
In the following table we publish the petroleum imports into the different ports of the United Kingdom during January. The total figures shew imports of 31,960,400 gallons—a quantity quite above the monthly average for last year. The figures are as under (in gallons):—

Port.	Illuminating.	Lubricating.	Residuals.	Gas Oil. (Solar.)	Benzine.	Fuel Oil.	Other Descriptions.
Aberdeen	8,000	—	—	—	—	—	—
Belfast	531,600	260	—	721,000	—	—	—
Bristol	1,774,560	183,740	—	—	—	—	16,000
Cardiff	1,136,430	5,770	—	—	—	—	—
Cork	—	60	—	—	—	—	—
Dover	—	80	—	—	—	—	—
Dublin	2,100	—	—	273,740	—	—	—
Dundee	1,280	2,950	—	—	—	—	—
Glasgow	—	201,380	8,400	—	—	—	7,250
Grangemouth	33,000	23,330	—	—	—	—	400
Grimsby	—	4,530	—	—	—	—	—
Harwich	—	770	—	—	—	—	—
Hull	830	256,750	—	—	120	—	10,180
Leith	41,250	24,380	—	—	—	—	—
Limerick	886,000	—	—	—	—	—	—
Liverpool	1,246,270	1,320,570	4,820	485,730	—	—	1,009,950
London	4,944,280	1,419,890	46,460	6,070,220	4,406,890	80	2,620
Manchester	2,399,550	1,812,700	—	485,730	—	—	3,650
Middlesboro'	—	1,360	—	—	—	—	—
Newcastle	—	14,280	—	—	—	—	—
Newport	—	6,000	—	—	—	—	—
Plymouth	—	570	—	—	—	—	—
Southampton	—	33,640	—	—	—	—	—
South Shields	9,000	72,800	—	—	—	—	—
Swansea	—	7,200	—	—	—	—	—
Totals	13,014,150	5,393,010	59,680	8,036,420	4,407,010	80	1,050,050

The Texas Company and its History.

A PIONEER OF THE TEXAS OIL INDUSTRY.

There is nothing which so aptly characterises the growth of the petroleum industry of Texas as the history of the Texas Co.—a concern of which we shall here give a few facts and figures. It is a transporter, refiner and distributor of petroleum and its products throughout the markets of the world, and its growth is one of the most remarkable business developments in the industrial history of this country. The company is seven years old, but in that period its capital stock has risen from $50,000, the capital of the parent company, to $18,000,000, its capital to-day, and its business has expanded from that of a small distributor of fuel oil to a point in tonnage regarded as second only to the Standard Oil Co.



The Texas Co., thanks to its excellent management, has from its inception pursued a most progressive policy, and to this is due the important position which the company so successfully holds to-day. It has in the period mentioned built distributing stations in all the principal cities and towns of Texas and Louisiana, established large refineries at Port Arthur and Dallas, acquired through purchase and by additions and alterations; put into operation probably the largest asphalt manufacturing plant in the world at Port Neches; established ocean and export terminals at Port Arthur, New Orleans, New York, Philadelphia, Baltimore, Providence, and in Europe; constructed extensive pipe-line systems and purchased tank cars and other equipment to handle business and make available for its refineries the oil production of the Texas, Louisiana and Oklahoma oil regions, and built or acquired an extensive fleet of oil-carrying vessels to take care of coastwise and export trade.

The present company is the outgrowth of the Texas Fuel Co. This parent concern was organised by citizens of Corsicana in 1901 with a capital stock of $50,000, and was incidental to the Beaumont oil boom, formed for the purpose of marketing fuel oil. It built earthen storage to take care of the overwhelming oil production at that time, and when the output began to decline and prices ascended, it realised on the investment. But the fuel oil market did not develop commensurate with stocks and supplies of oil, and it was found necessary to create new or additional avenues of disposition.

It was just at this juncture that the Texas Co. was formed with a capital stock of $3,000,000, with head offices at Beaumont. It immediately concentrated its attention upon the construction of a refinery at Port Arthur, Texas, and the establishment of other facilities, such as pipe lines, etc., to bring the raw material to the new works, and this enterprise marked the beginning of expansion into the refining branch of the Gulf Coast oil industry in 1902. Ocean terminals were built at Port Arthur and on the Atlantic Coast and the nucleus of a fleet of oil-carrying vessels formed.

The Texas Company's Works at Port Arthur.

As readers of the Review will recollect, new oil fields in America were developed about this time, and the market for refined and lubricating oils commenced to expand. To meet these new conditions and in order to provide additional marketing and other facilities, as well as new investments, it was found necessary to increase the capital from $3,000,000 to $6,000,000, and this was successfully done in 1904.

Still the Texas Co. continued its policy of expansion, and early in 1906, the company acquired the works of the Central Asphalt and Refining Co., located at Port Neches, Texas, about midway between Beaumont and Port Arthur, on the Neches River. Additions and alterations were made, until now it is looked upon as the largest asphalt manufacturing plant in the world.

But it was in 1906 that the Texas Co. made one bold bid to strengthen its position as a refiner and exporter. The output of the Gulf Coast fields had for some time been steadily but consistently declining, and the stocks of oil held by the company, with demand greater than the supply, began to fall off also. No new fields were developed or in prospect, and the question of a permanent supply of crude on which to operate its refineries became vital to the best interests of the company. Just at that time the Oklahoma fields became a prominent factor in regard to crude oil production, and as the output assumed large proportions, and the further fact that oil produced in that region is better adapted to the manufacture of refined products than the Gulf Coast crude, the Texas Co decided that its refineries should be placed in a position to run on Oklahoma crude oil. But many difficulties

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HIGHEST GRADES. UNIFORM QUALITY.
"TEXACO" BITUMEN.
Over 99 % Pure Bitumen.

were in the way, that of transport from Oklahoma to the Gulf being the greatest. A trunk pipe line was the only way of making certain of a permanent supply of Oklahoma crude oil, and so to enable consummation of the project the capital stock of the company was increased from $6,000,000 to $12,000,000 early in 1907.

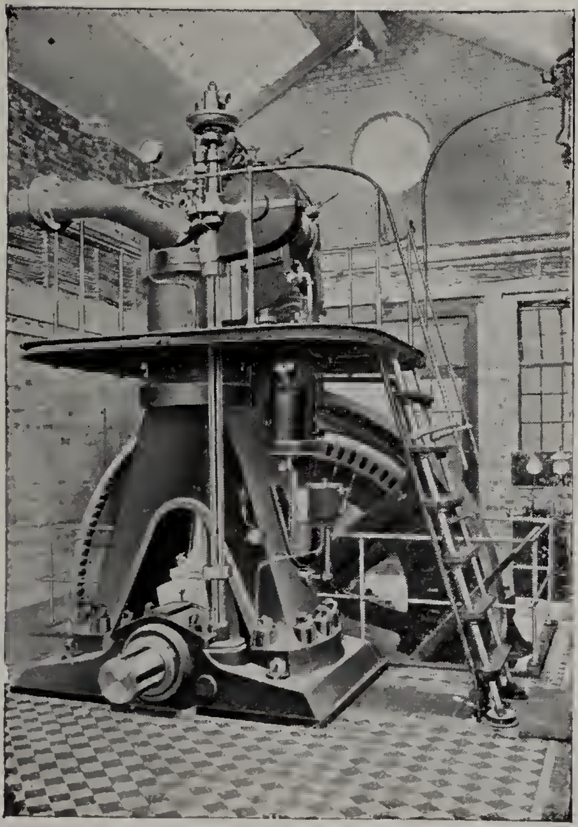
The Oklahoma-Gulf pipe line of the company is eight inches in diameter and capable of handling approximately 30,000 barrels a day of crude. Construction was begun early in 1907 and completed early in 1908. It extends, as can be seen by a glance at the map on this page, from the Glenn pool, in Oklahoma, to a connection with the Gulf Coast system of pipe lines of the company at Humble, Texas. In addition to the construction of this line, with the necessary pumping stations, seven in number, over a distance of 452 miles, a refiney was established near Dallas, where the lighter portions of Oklahoma crude are taken from the oil and piped separately to Port Arthur, while the heavier or remaining portion is retained at Dallas to supply the fuel trade of North Texas. Oklahoma crude, being particularly well adapted to the manufacture of refined products, enabled the company to supply the world's markets with a better grade of oil than that obtained solely from the Gulf Coast crude, which is better adapted to the manufacture of asphalt or for fuel purposes.

A VIEW IN THE SARATOGA OILFIELD.

Since the completion of the Gulf pipe line the growth and expansion of the business of the company was continued, and toward the close of last year the capital stock was increased from $12,000,000 to $18,000,000 in order that the operations might be still further extended.

Last year the company moved its general offices from Beaumont to Houston and the establishment of branch offices in several countries of the world suggests that progress is not yet abated.

The company's career is certainly one of which the American petroleum industry may well be proud, and is a striking example of what well-directed enterprise may accomplish.



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REVIEW OF THE TRADE IN PETROLEUM PRODUCTS IN MOSCOW.

DETAILS FOR 1908.

A comparison of the conditions of the residual contract season in 1907-8 with those of 1908-9 reveals a sharp contrast. In 1907, sales began at the price of 47-48 copecs per pood in bulk ex depôt, and 49-50 copecs with delivery by cart. Towards the end of March, when the shipping strike broke out on the Caspian Sea, prices rose considerably, and sales went on at the price of 52-53 copecs in bulk and 54-55 copecs with delivery.

In 1908, on the other hand, big sales commenced in January, and in the course of three months, *i.e.*, by the 1st of April, 1908, practically all contracts were concluded for the season of 1908-9 at the prices of 47-48 copecs in bulk ex depôt, with delivery in Moscow 49½-50 copecs; in tank waggons at Nijni 38½-39 copecs; ex barge at Kineshma, 38-38½ copecs; in tank waggons, 39-39½ copecs; and at Jaroslav in tank waggons during one year, 40½-41 copecs.

In February contracts were given out by the Administration of the Northern Railways for the supply of 5,000,000 poods of residuals, with delivery during the navigation of 1908, in Jaroslav ex barges at 38½ copecs, and for delivery in tank waggons during the winter at 39½ copecs. In April, the Moscow municipality made a contract for the supply of 2,500,000 poods with Shamsi Assadulaeff, at the price of 41½ copecs delivered at Moscow station, and 43½ copecs delivered to the places of consumption, delivery to be made during twelve months from 1st November, 1908.

The rumours which were then current of an inpending strike of sailors in the Caspian fleet were not substantiated, the navigation opened without any complications and thus prices began to fall.

At the end of March sales were concluded at 46-47 copecs in bulk ex. depôt, with delivery 48-49 copecs. In April the prices were 45-46 copecs in bulk ex. depôt and 47-48 copecs including delivery. Large contracts were concluded and one deal for 1,800,000 poods was made at 42 copecs, with delivery in tank waggons at Moscow station. In June and July the liquid fuel market was very weak and contracts were made for delivery up to the 1st of May, 1909, at the prices of 43-44 copecs with delivery and 40-41 copecs in tank waggons. The Moscow-Kazan Railway bought 5,000,000 poods at 30⅝ copecs delivered at Batraki during the navigation of 1908-9 and 2,000,000 poods at 28⅝ copecs to be delivered likewise at Batraki between 1st July and 1st October, 1909.

In view of the comparatively high prices which ruled at the beginning, those manufacturers who changed over to coal remained mostly on solid fuel, and only in July a movement began to be noticed of a partial return to liquid fuel and some manufacturers began to buy residuals. Generally speaking, the increased demand for liquid fuel came solely from the railways. The manufacturers have incurred a heavy outlay in adapting their furnaces for coal, and in the absence of any certainty in the stability of liquid fuel prices, they preferred to stick to coal. Calculations have proved that a return to liquid fuel is possible only at a price of 40 copecs for residuals delivered to the consumers in Moscow, but after the close of navigation it was ascertained that the stocks in the upper Volga ports were quite small and prices in Moscow stiffened again. All sales of liquid fuel to house owners were made at 45-46 copecs per pood.

The sellers of liquid fuel on the Moscow market last year were: Nobel Bros., the Mazout Co., Shamsi Assadulaeff, Eastern Transport Co., Oka Co., I. T. Tchernych, J. S. Tchernoneboff, Ter-Akopoff, K. A. Ziller and G. S. Dembot. In the coming season two more firms will come forward as sellers: the Caspian Society and Stacheeff.

Crude oil was in considerable demand during the past year in the Moscow district district. From January until April the price in bulk ex. depôt was 55-56 copecs, with delivery 57-58 copecs. In May and June the prices were 50-51 and 52-54 copecs per pood respectively, while from July to end of December the prices were 46-47 copecs ex. depôt and 49-50 copecs with delivery.

The prices of kerosene during the year were: in January, February and March, in bulk, 145-150 copecs; in April, 138-143 copecs; in May and June, 130-135 copecs; July, August, September and October, 125-130 copecs; and November and December, 120-125 copecs per pood.

Astraline, which is a heavy high flash illuminating oil, was sold at 190-200 copecs per pood in barrels.

With regard to lubricating oils, machine oil was sold at 2-2·10 roubles per pood in barrels; spindle oil, 1·95-2 roubles; cylinder oil, 3·50 to 5 roubles per pood according to quality.

In comparison with 1907 the sales of benzine for the year doubled in consequence of the demand for motor-cars. According to specific gravity and degree of refining, the price ranged between 2·50 and 4·75 roubles per pood.

CLASSIFIED IMPORTS INTO UNITED KINGDOM UP TO FEBRUARY 8th, 1909.

IN GALLONS.

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Country.	Illuminating.		Lubricating.		Residuals.		Gas Oil. (Solar)		Benzine.		Fuel Oil.		Other Descriptions.		Totals.	
	Since Jan. 25.	From Jan. 1.	Since Jan. 25.	From Jan. 1.	Since Jan 25.	From Jan. 1.	Since Jan. 25.	From Jan. 1.	Since Jan. 25.	From Jan. 1.	Since Jan. 25.	From Jan. 1.	Since Jan. 25.	From Jan. 1.,	Since Jan. 25.	From Jan. 1.
Austria ...	—	—	18,360	18,360	146,890	243,110	—	—	—	—	—	—	—	—	165,250	261,470
Belgium ...	—	70	29.460	71,400	—	—	—	—	—	—	—	—	—	—	29,460	71,470
Canada ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dutch India.	400	400	—	—	—	—	—	—	1,392,000	3,969,300	80	80	80	80	1,392,560	3 969,860
Germany ...	55,350	131,210	38,200	101,490	—	—	—	—	—	—	—	—	—	4,640	93,550	237,340
Holland ...	—	300	—	640	—	—	—	—	42,000	47,000	—	—	2,540	7,480	44,540	55,420
Roumania ...	—	139,750	—	—	—	—	1,272,800	1,272,800	—	938,360	—	—	—	—	1,272,800	2,350,910
Russia ...	—	2,942,360	305,760	326,270	—	—	—	—	—	886,540	—	—	—	59 530	305,760	4,155,170
U.S.A. ...	6,848.630	14,948,440	1,004,610	5,605,640	4,810	12,720	343,950	7,107,570	2,743,750	2,743,750	—	—	52,050	1,000,970	10,997,800	31,478,620
Other Countries	—	—	2.410	7,370	—	—	—	—	—	—	—	—	—	1,000	2,410	8,370
	6,904.380	18,162,530	1,398,800	6,131,170	151,700	255,830	1,616,750	8,380,370	4,177,750	8,584,950	80	80	54,670	1,073,700	14,304,130	42.588,630

The Fractionation of Crude Petroleum by Capillary Diffusion.

BY MESSRS. . . .
J. ELLIOTT GILPIN .
AND . . . . . .
MARSHALL P. CRAM.

AN IMPORTANT AMERICAN GOVERNMENT BULLETIN.

When, in process of refinement, black vaseline is filtered through warm, dry fuller's earth, the first product is an oil that is perfectly liquid at ordinary temperatures, but the succeeding portions are progressively more viscous until fairly hard vaseline is obtained. The observation that a fractional separation of oils in vaseline had been affected suggested to Dr. David T. Day that a like result might be obtained with crude petroleum. He applied this method to a sample of green crude petroleum from the "third sand" of Venango County, Pa., and found that light products, chiefly gasoline, first appeared when such crude oil was allowed to filter down through a long glass tube filled with granulated or powdered fuller's earth.

This result was followed by experiments with a more elaborate system of specially constructed funnels similar to those used by the refiners of vaseline in testing the comparative value of various fuller's earths. The results from these experiments were briefly summarised in a paper on the ability of petroleum to migrate in the earth. Engler later verified these results and shewed that the separation was mechanical and that no oxidation was effected in the process. Dr. Day next used a large closed funnel of galvanized iron holding about 100 pounds of fuller's earth. When crude petroleum was dropped slowly and regularly into this funnel, rather light oils were obtained at first, followed by the usual succession of heavier oils. As it was evident from this work that much of the oil passed through crevices without any change, Dr. Day tried the effect of reversing the route of the oil and of allowing it to difiuse upward through a tube packed tightly with fuller's earth. In such a tube the lighter constituents rose much more rapidly than the more viscous oils, so that by separating the fuller's earth from different sections of the tube and displacing the oil by water, very different oils were obtained from the upper and lower parts of the tube.

By using several tubes and uniting oils of the same specific gravity oil of different grades can be collected in sufficient quantity to be fractionated again, and the process can be continued until oils result which are not altered by further passage through tubes filled with fuller's earth. At the suggestion and with the co-operation of Dr. Day we have taken up this problem with the results now stated.

The tubes used first were of glass, three feet long and one and one-eigth inches in diameter. They were closed at the lower end with corks along whose sides six or seven grooves had been cut, the inner end of the cork being covered with a bit of cotton cloth to prevent the earth from sifting out through the grooves. Such tubes filled with fuller's earth were placed with their lower ends in an open dish of petroleum and the oil was allowed to rise.

At room temperatures (18° to 22° C.) and atmospheric pressure, the rate of rise of crude petroleum in a tube filled with fuller's earth was very slow. In seven days the oil ascended but 73 centimetres in one tube and 59 centimetres in another, and in a third tube ten days were required for it to rise 59 centimetres. To study the effect of heat, a glass tube about three long and one and a-half inches in diameter was filled with earth and placed in a bottle holding about two litres of oil, and the whole was heated by an electric stove with which temperatures considerably above those of the room could be maintained day and night. The temperature of the tube was kept between 40° and 70° for three days, in which time the oil rose 54·7 centimetres in the tube; in another tube packed in all ways like the first, but held at room temperature (about 20°), the oil rose 45 centimetres in the same length of time. With two tubes in which the earth was packed much less compactly the time required for the oil to rise 54 centimetres was four days for the tube at room temperature and two days for the one at 50° to 80°. The rate of rise was evidently but little affected by heat, at least within this range of temperature, and higher temperatures could not be used without loss of the more volatile constituents of the oil.

The next attempt at increasing the rate of rise of the oil consisted in applying diminished pressure to the top of the tube, which reduced the time required for the oil to reach the top of a tube five feet long from several weeks to seventeen hours. If diminished pressure is continued after the oil has reached the top and if the oil is not exhausted in the reservoir at the bottom, oil will be drawn over from the top of the tube. The specific gravity of the oil thus collected steadily rises as it comes over. The samples so obtained, however, stand under very low pressures for some time, which may cause a loss of their more volatile constituents. This suggested applying increased pressure to the oil in the reservoir rather than diminshed pressure to the top of the tube, and an iron bomb, like those used for the transportation of mercury, was fitted with an iron pipe seven feet long to contain earth and a side arm at the bottom of the bomb to which a water column might be attached.

The bomb, which held about two litres, could be partly filled with petroleum and the pipe containing the earth screwed into the top. The side arm which opened into the bottom of the bomb could then be connected with the water pressure so that the lower part of the bomb was filled with water which drove the petroleum upward. The oil obtained at the top, however, was fractionated no further nor in any larger amounts than when the oil was not allowed to emerge from the top of the tube. The difficulty of setting up such a pressure apparatus with tight connections, as well as the range of pressure required—a column of water seven feet high being too great when the oil was just started up the tube and a column 30 feet high being insufficient when it was near the top—made its use impracticable.

To use diminished pressure, the earth in the tubes must not be packed so hard that the air just above the oil cannot be drawn through the earth above, nor must the earth be packed so loosely that the oil will rise as in a vacuum. The right degree of hardness is obtained by filling about one foot of the tube at a time and packing that much earth as hard as possible with a wooden rod tipped with a rubber stopper. If the tube when pounded on the floor rings in the hand, it indicates that the earth may be packed too closely. Tubes may be packed much more easily by filling several at once, with a separate ramrod for each. By allowing a few minutes to elapse between successive liftings of the ramrod, much labour is avoided. A bit of cotton waste below a rubber stopper at the top of the tube will prevent any earth from being drawn up when the air is exhausted.

The fuller's earth was first heated in shallow iron pans until it ceased to form geysers when stirred. The earth must be thoroughly cold before it is packed into tubes, or the contraction will be sufficient to allow the oil to run up the tube immediately when the air is exhausted.

Much trouble was experienced with the tubes first used on account of their breaking—not when in service, but soon afterward. This was thought to be due to the age of the tubing, but the same thing happened with new tubes five feet long and one and a-quarter inches in diameter. With the idea that the iron scraper used to remove the earth from the tubes might be the cause, a scraper entirely of wood was tried, but this did not decrease the breakage, it being nothing unusual on going to the laboratory in the morning to find that half of the tubes which had been emptied the day before were cracked.

It had been considered necessary to use tubes of glass in order that the height to which the oil had risen could be seen and that in removing the oil from the middle of the tube it might be scraped out to a sharp dividing line, as the level to which the oil has risen is the point from which should be made all measurements of sections into which the tube is to be divided. Tin tubes were used later to avoid the trouble experienced with glass tubes. These tin tubes were emptied by shaking the earth from the bottom into four 30-centimetre cylinders of the same diameter as the tube, these cylinders being made of two curved pieces of tin held together by a cap at one end and a ring at the other. The cylinders containing the contents of the tube could be opened lengthwise and the earth divided into any desired lengths. Two glass tubes five feet long and one and one-quarter inches in diameter were set up in the same dish of petroleum with ten or twenty tin tubes five and a-half feet long and of the same diameter as the glass tabes, and when the oil stood at the top of the glass tubes the tin ones were also opened. Glass tubes, of course, can be be emptied as well as tin tubes by shaking the contents from the bottom, and there was no more breakage after this method was adopted.

The level to which the oil will rise can be regulated by the amount of oil in which the tube is placed, and in the later work the adoption of this method did away with the use of glass tubes entirely. In a tube one and one-quarter inches in diameter and five and a-half feet long 950 cubic centimeters of oil will rise within 20 to 35 centimetres of the top.

When the oily earth has been removed from the tube, the oil may be separated by adding water. In the first experiments enough water was added to form a very thin mud, which was thoroughly stirred by a small propellor driven by a water motor. The mixed earth, oil, and water were then poured into a large separating funnel and allowed to stand several minutes until the oil had collected at the top. The earth and water could then be drawn off and the pure oil left.

It was found later, however, that if less water is added to the earth as removed from the tubes, after standing a few minutes all the water will pass into the earth and this will be accompanied by the liberation of oil. Oil so liberated can then be poured off directly from the earth without the labour of churning. When water first begins to liberate oil, the earth is granular; but when more water has been added and the last of the oil recovered, the earth has the consistency of a thin paste that will flow when the dish is inclined, which it will not do when the oil begins to come off.

All the oil from one section of a tube is of the same colour irrespective of whether it is the first or the last oil to come off when water is added. It was assumed at first that all the oil which came from one section of earth had the same specific gravity, but this was found later not to be the case. The first oil to be collected, if taken in sufficiently small volume, say about 20 cubic centimetres, is slightly heavier than the next portion. If as much as 100 cubic centimetres is included in the first sample, however, this will not be true. Beginning with the second sample the successive portions of oil steadily increase in specific gravity, the gradual addition of water affording another means of fractionation in addition to the separating power of the earth. Both of these methods of separation have been combined in this investigation. The earth must be thoroughly mixed after each addition of water to prevent a layer of water-wet earth from isolating earth that contains oil from the water added.

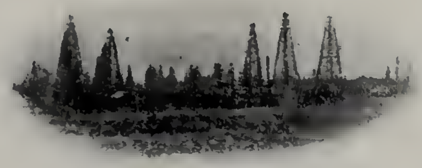
The petroleum used was a dark-green oil from Venango county, Pa., of specific gravity 0·810. When 950 cubic centimetres of this oil was drawn upward in a tin tube five and a-half feet long, the following separation was obtained:

Fractionation of Crude Petroleum in Single Tubes.

	1.		2.		3.	
Time required, in hours..	23·5		17·5		17·5	
Distance from top of tube to oil when opened, in centimetres	31		28		28	
	Spec. grav.	Cubic centimtrs.	Spec. grav.	Cubic centimtrs.	Spec. grav.	Cubic centimtrs.
A, 8 centimetres at top..	0·796	42	0·8012	30	0·8022	18
B, next 8 centimetres ..	·808	45	·804	37	·803	35
C, next 18 centimetres	·8125	75	·807	47	·8075	66
	·8137	24	·809	22	·810	25
D, next 30 centimetres..	·815	130	·8125	148	·812	140
E, next 35 centimetres..	·818	170	·8185	190	·8175	145
F, rest	·8205	125	·823	100	·821	105
		611		574		534

The oil in grade C was collected in two portions, the second being obtained by the addition of more water after the first lot of oil was poured off. Although 950 cubic centimetres of crude petroleum were used in each experiment, it will be noticed that the oil recovered measures much less than that. When several tubes were worked up together, in one test 9,070 cubic centimetres of crude petroleum yielded 5,951 cubic centimetres of oil and in another 8,915 cubic centimetres gave 5,415 cubic centimetres.

(*To be concluded.*)



1899-1909.

Ten Years' Progress of the American Petroleum Industry.

REMARKABLE EXPANSION.

Never in the history of any branch of a national industry has, we should imagine, such remarkable strides been made as those associated with the development of the petroleum industry of the United States during the past ten years. The rapidity with which developments have proceeded is without precedent in any other oil producing country in the world, and this fact is conclusively proved by the figures of production. While the total yield of petroleum in the United States last year was 176,000,000 barrels, ten years ago it was but 55,000,000 barrels, or considerably under one-third of its present proportions.

In one of the earliest issues of the Review, we published a summary of the official report upon the American petroleum industry for 1898, and a comparison of this with those bulky statistics given in the last issue of the Review cannot but impress one with the solid and substantial expansion which has taken place during the last decade. The intervening time has brought about many changes: fields which now to-day are responsible for the greater part of the oil production of America were then unthought of, while on the other hand, territories which at that time yielded the bulk of the production, have long ago decayed. As an example, we have the striking record of the Pennsylvanian fields. Ten years ago they formed one of the chief centres of attraction for the operator, and in 1898 were responsible for no less than 60 per cent. of the total production of the States, and for that year over 7,000 wells were drilled in those high grade producing districts. To-day, however, the yield from the Pennsylvanian territories does not amount to 15 per cent. of America's total oil yield.

But, nevertheless, the American industry has continued to advance from year to year, as may be seen from the following table: –

	Barrels.		Barrels.
1899	57,000,000	1904	117,000,000
1900	62,000,000	1905	134,000,000
1901	69,000,000	1906	136,000,000
1902	88,000,000	1607	157,000,000
1903	100,000,000	1908	176,000,000

Year by year, following upon the decline of the high grade producing localities in Pennsylvania, a striking feature has been the increased importance of the low grade heavy oils in the total production. This change in the relative conditions of the producing industry has been in progress for several years, but though the great increase of production from the newer and lower grade oil fields make the records from the Pennsylvanian fields shew rapid decrease in their percentage of the whole production, the actual rate of decrease in those high grade oil fields is really much slower. This is due not so much to the development of new areas in the Pennsylvanian territories, as to the renewed pumping of old wells, for it must be remembered that what were years ago considered unremunerative wells are now on the paying list, and doing very creditably.

Analysing the figures of ten years ago, we find that the Lima-Indiana fields accounted for 36 per cent. of the other production, and thus, the whole of the remaining fields in the United States were responsible for but about four cent. of the 55,000,000 barrels produced in 1898. As shewing the vast change which has come over this once very productive region, we may take the figures we published in the last issue of the Review, and from which it will be seen that for last year the Lima-Indiana fields produced even less than four per cent. of the total American production.

What position America would have occupied to-day had it not been for the bringing in of those remarkably prolific territories in California, Illinois, the Mid-Continent and Texas, one hesitates to say. Were it not, however, for these territories, it is clear that America to-day would be producing less than 30,000,000 barrels per annum instead of her 176,000,000 barrels, as already mentioned.

We will first take the Mid-Continent fields, for to-day in American petroleum production they take the first place, producing last year approximately 50,000,000 barrels. When one speaks of developing a region for its oil production, one gets but a very poor idea of the wonderful amount of activity which must have been displayed during the past few years to bring these fields into the position of the largest producers in America. When the Review was first published, we recollect briefly referring to the possibilities of the territories of Kansas, Oklahoma and Northern Texas (now classed as the Mid-Continental region), for it was in 1898 that the combined production of oil from the various localities reached half-a-million barrels, in fact, for the preceding ten years the whole of the production had not amounted to so much. From 1898, however, it began to spring forward though, as the following table will shew, it was not until 1903 that the production for the year exceeded one million barrels, or 2 per cent. of what it is to-day.

	Barrels.		Barrels.
1899	740,000	1904	6,200,000
1900	900,000	1905	12,500,000
1901	980,000	1906	22,800,000
1902	986,000	1907	45,000,000
1903	1,570,000	1908	50,000,000

As will be noticed, the first decided leap forward which the production of the field took was during 1906, and the Glenn Pool was responsible for this. The history of the discovery and the consequent rapid development of the Glenn Pool must ever remain one of the most remarkable events associated with the American petroleum industry. It was in 1906 that it first came into prominence, and week by week its production of oil continued to increase at an alarming rate until during 1907, toward the latter end of the year its yield was almost 2,400,000 barrels per month. Then the operators and those whose efforts lay in the desire to take care of the production were faced with the grave problem of storage and transport. The supply above ground was enormous, yet increasing daily, and though the Prairie Oil and Gas Co. rose to the occasion and night and day built steel storage tanks, matters reached a climax during the year. The greatest problem of all doubtless was the lack of transport facilities, and happily for the field, projects were mooted, and eventually realised for the construction of pipe lines to the Gulf. To-day these lines are in working order, and as a result, the congestion in the Mid-Continent fields is not so great as it was, though there are still more opportunities for increased transportation facilities. The crude oil has found a hundred and one outlets already, and to-day the majority of the refineries in Texas are using the oil for refining purposes.

California now ranks as one of America's chief oil producing states, being second only to the Mid-Continental fields. Last year her oil production was close upon 40,000,000 barrels, yet in 1898 it amounted to only 2,200,000 barrels. The progress of California during the past ten years is indeed one of the most remarkable events associated with the American industry. Drilling for oil has been energetically pushed forward over the 40,000 square miles of supposed petroliferous territory in the State, and the success which has been met with is best shewn by the following table of production :—

	Barrels.		Barrels.
1899	2,700,000	1904	30,000,000
1900	4,000,000	1905	33,000,000
1901	9,000,000	1906	33,000,000
1902	14,000,000	1907	40,000,000
1903	24,000,000	1908	45,000,000

At one time the great difficulty which Californian producers had to face was the absence of a market, but now, with the advent of liquid fuel and its general use, in almost every land boiler in the State and upon every vessel trading from Californian ports, together with the ever increasing demand from the Far East for the crude oil as well as the refined products, the demand is quite equal to the present supply, great though it be.

Of Illinois there is little to be said. It has, with one bound, come forward as the third greatest producing locality in the States, though during the first half of 1905 it had no oil production at all. In 1906, however, it produced 4,000,000 barrels, and after that came a boom in oil operations, the like of which can scarcely find any parallel, for in 1907 the production rose to 24,000,000 barrels, and last year to 35,000,000 barrels, while to-day it is still on the up grade.

Readers of the Review for the past few years will be fully aware of the rise of the Texas fields, the incoming of the famous gushers at Spindle Top, the booms at Sour Lake, Humble and Batson Prairie, only to be followed a year or two afterwards by so sudden a decline. It was in 1902 that the several territories began to attract attention, and their production from that time may be seen from the following figures :—

	Barrels.		Barrels.
1901	3,600,000	1905	36,500,000
1902	18,000,000	1906	20,500,000
1903	18,500,000	1907	16,000,000
1904	24,600,000	1908	16,000,000

But the Texas fields play as important a part now as they ever did, for the boom periods have passed and the producing wells have settled down to a steady yield of oil, which, after all, counts as great an asset as those wells of the gusher type, which come in one day and ignommously fail shortly afterwards.

◆

In Indiana.—An incentive to activity in drilling has been given to operations in the Indiana field by the bringing in of three very good producers and an enormous gas well in the western part of Pike County. The formation is stated to be identical with that of the Illinois fields

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THE PETROLEUM RESOURCES OF THE UNITED STATES.

Important Government Report.

WASTE IN THE USE OF PETROLEUM AND HOW TO PREVENT IT.

What may be considered as one of the most important Government reports issued by the United States Geological Survey relating to the petroleum industry, is that about to be published from the pen of Dr. David T. Day upon the petroleum resources of the United States. This report has been already transmitted to the President and is to be used as the basis of the message forwarded by him to Congress on the 22nd. So far as we are aware, this is the first attempt ever made by a government official to compile such a report, and in view of the great experience which Dr. Day has had in the oil fields of the world, and especially his close association with the American petroleum industry, renders the report at once full of interest. We therefore publish the report *in extenso*, but in doing so would mention that it is limited simply to those fields which have been actually developed, or are recognised as being petroliferous—facts have been the basis of the report as far as has been possible.

The report reads as under:—

"Petroleum is unknown and improbable East of the Allegheny Mountains. Parallel with their western flank the Appalachian belt extends from Western New York to Tennessee. It crosses Western Pennsylvania, and there petroleum was first found in large quantity. The supply in Pennsylvania is rapidly becoming exhausted. It has declined to one-third its highest rate of production. This high production mark was only 17 years ago. The Appalachian field continues across West Virginia and includes the eastern edge of Ohio. Farther south moderare supplies have long been known, and are still being developed in Kentucky and Tennessee.

"The petroleum of the Appalachian field (known generally as Pennsylvania petroleum) differs essentially from that of the other petroleum fields in the United States. It is notably different from any other petroleum thus far found in the world. It is most easily converted into lamp oil, and yields the greatest percentage of this product except the products from Western Ohio and Indiana, and the petroleum from this latter field costs more to refine.

"Farther south in Kentucky and Tennessee the product is progressively poorer, but is much better than Russian, or any other of the foreign products with which it comes in competition.

"The second great field in historical development covers a considerable portion of North-western Ohio and Eastern Indiana, and small isolated pools of petroleum of the same general character are found elsewhere in Indiana. This petroleum is more uniform than the Pennsylvania varieties. It contains, quite uniformly, less gasoline and less lamp oils, and the presence of organic sulphur compounds results in an average of one-half of one per cent. of sulphur, which can be removed only by ingenious and comparatively costly refining processes.

"In Illinois, near the eastern edge, a strip of territory some thirty miles long and of irregular width, averaging about six miles, is yielding a comparatively enormous quantity of petroleum. It is freer from sulphur than the Lima-Indiana variety, and occasionally contains sufficient asphalt to ally it to the petroleum from the next field to the west mid-continent field.

"The Mid-Continent field comprises the pools in Kansas and Oklahoma, and must eventually include, for statistical purposes, the pools in Northwestern Louisiana and Southern Texas. The yield from this field within the last two years has been so large as to greatly disturb the industry, on account of the difficulty of providing sufficient refining and transportation facilities. This petroleum differs from Pennsylvania petroleum in frequently containing small amounts of asphalt, and also in containing hydrocarbons less stable in their action towards the chemicals used in refining them. Nevertheless it has proved possible to obtain good yields of perfectly satisfactory products covering the entire range from gasolene to paraffine wax. Occasionally the petroleum of this field contains sufficient water and other foreign materials to complicate the matter of giving it a just valuation, and also adding to the difficulty of the refining processes.

"In the Mid-Continent field the Glenn pool, located a few miles south of Tulsa, Oklahoma, is a good illustration of the uncertainties of petroleum. A well drilled in 1905 happened to be located a few feet within the limits of this pool. Had it been located slightly farther to the east the field would not then have been discovered, but the very considerable flow from this well caused more than usual excitement, and nearly all of the wells drilled to the west proved good producers. Therefore, the wells produced 1,000,000 barrels from 1,000 acres of ground within the year 1906. Well drilling was so rapid, in fact, that the pool reached its maximum production thirteen months after the discovery of the first well, and from that time the production declined almost as rapidly as it had increased, until the decline was arrested by cleaning out the wells, and afterwards, also, shooting them with nitro-glycerine. The transportation companies could not keep up with such rapid development, and perhaps 1,000,000 barrels of petroleum was wasted on the ground within two years

"For many years the escape of petroleum and natural gas to the surface has been noticed at many points in Texas and in Southern Louisiana. This led to the drilling, in 1901, of a well at Spindle Top, near Beaumont, Texas, from which probably more than 500,000 barrels of petroleum flowed before the well could be checked. The field was soon extended to Jennings and Welsh, and eventually to Anse la Butte, in Louisiana. Other wells were rapidly drilled, resulting in a large addition to the petroleum product of the United States. This petroleum contains a large percentage of asphaltum, and relatively small amounts of gasoline and lamp oils, and therefore offers little temptation to the refiner. It is also handicapped by the presence of sulphur in many forms. For some years it was disposed of principally to the railroads and burned as fuel on locomotives, and thus caused considerable industrial development in Texas, because it was necessary to sell the petroleum at prices which declined to as low as ten cents per barrel, in order to find a market for the product. After persistent endeavour it has become possible to refine this petroleum successfully, and some of the products have peculiar value, thus the lubricating oils find considerable favour, and the gasoline has special value as a solvent.

"Petroleum, principally asphaltic and similar to the Texas petroleum except that it is almost free from sulphur, is found in many areas in California, between Los Angeles and San Francisco, the principal fields being Los Angeles City, Puente Hills, Kern River, Sunset, McKittrick, Santa Maria, Coalinga, and Fullerton. The lack of an adequate supply of fuel in California has led to very great development of the petroleum industry, as shewn in the production tables below, and investigations have shewn that the quantity of petroleum existing in California is greater than in any other known field in the United States.

"The great fields described above are those which control the course of the industry. West of the Mid-Continent field, and east of the California field, are several smaller ones (as thus far developed) in Colorado and Wyoming, with promises of fields in New Mexico, Utah, Idaho, Montana, Oregon, and Washington. In Alaska at least two petroleum pools have been developed, which are evidently capable of considerable output when the market conditions become favourable.

"There are many other regions in the United States where there is no geological improbability of finding petroleum. Such geological improbability consists of rocks, greatly disturbed and broken up to such a depth as to prevent probable drilling to the undisturbed sedimentary rocks which could furnish good storage for petroleum.

"In each petroleum field it has become necessary for the pipe line companies and for the producers themselves to locate on detailed maps, every well as it is drilled, distinguishing the productive from the dry wells, in order that the limitations of each field may be promptly determined. From these, principally, and with the aid of much independent data collected by himself, Dr. F. H. Oliphant has compiled a map of the petroleum fields in the United States, which is appended to this report. From measurements of the areas on this map, together with revisions from the map recently published by Dr. I. C. White, State Geologist of West Virginia, and with the aid of Dr. H. Foster Bain, Director of the Geological Survey of Illinois; Ralph Arnold, in charge of the petroleum investigations in California for the United States Geological Survey; A. C. Veatch, for Wyoming; Dr. J. A. Brownocker, State Geologist of Ohio, and with additional data from Dr. Oliphant, the following table has been compiled, giving in square miles the area of petroleum territory in each State. The figures here given are merely general approximations, which lack very much in uniformity. In some States the area shews simply actual 'proven territory.' In others, as in Alabama, the area indicates the region in which the future production of petroleum is probable. In many others considerable territory is included between individual pools, which in all probability will prove to be barren, and while the extensions of 'proven territory' will, to a certain extent, offset that which proves eventually to be barren, the table is, at best, a rough approximation. It takes no account whatever of the fact that other fields now altogether unknown will be developed in the future.

	Sq. in.		Sq. in.
Alaska	500	New York	300
Alabama	50	Ohio, Eastern	115
California	850	Ohio, Western	535
Colorado	200	Oklahoma	400
Idaho	10	Pennsylvania	2,000
Illinois	200	Tennessee	80
Indiana	1,000	Texas	400
Kansas	200	Utah	40
Kentucky	400	West Virginia	570
Louisiana	60	Wyoming	750
Michigan	80		
Missouri	30	Total	8,850
New Mexico	80		

"The thickness of the 'pay sands' in these fields varies within wide limits. In West Virginia, Dr. White considers five feet of 'pay sands' to be a safe estimate in good producing territory. This is sufficiently liberal for Pennsylvania also. In other fields much thicker 'pay sands' are recognised. In Illinois the 'pay' streaks in the petroleum sands vary from two feet to over 30 feet in thickness, and at Spindle Top, in Texas, an average thickness of over 75 feet has been calculated. In California, particularly in the Kern River field, the 'pay sands' reach a thickness of over 100 feet.

"The character of the 'pay' streaks in the petroleum-bearing formations of the United States varies from sandstones and dolomites, with a compactness of ordinary building stone, to unconsolidated sands and coarse gravel, and in exceptional cases, honeycombed limestones, in which actual cavities of considerable size have to be reckoned with. It has been customary to consider 10 per cent. as near the average porosity of the 'pay sand,' with a latitude of variation from practically nothing in damp shales to over 30 per cent. in the most porous strata.

"The principal effect of these variations in porosity is rather upon the rate at which the petroleum can be obtained from the pool than upon the total amount obtainable.

PROBABLE SUPPLY OF PETROLEUM.

"Assuming ten per cent. as the average porosity of 'pay sands', one cubic foot of 'pay sand,' would yield one gallon of petroleum, or 5,000 barrels per acre of 'pay sands,' with an average thickness of five feet.

"The thickness most frequently reported for the 'pay sands', of various fields is normally much in excess of five feet. In Pennsylvannia, the reported thickness of petroleum-bearing strata will average more than this, and frequently more than one petroleum-bearing stratum has been noted in the same well, and yet, as will be shewn in the tables of production below, the average yield per acre in Pennsylvania has been less than 800 barrels, and at the present rate of decline it is not probable that more than 800 barrels will be obtained, on the average, per acre, for New York and Pennsylvania. It is fair to assume that 1,000 barrels per acre is a sufficient allowance for New York, Pennsylvania, West Virginia, Kentucky, Tennessee, Ohio, and Indiana. In Illinois, where the yields have been unusually great on account of 'pay' streaks approximating 25 feet on the average, Dr. Bain estimates 8,000 barrels per acre, as the result of conferences with the producers. This is taking into consideration the fact that in the Northern portions of the field the yield is frequently not greater than 2,500 barrels per acre. In the Texas field the supply is better calculated by consideration of the amount already yielded and the rate of decline, from which it is estimated that the Texas fields will surely yield 200,000,000 barrels, and Louisiana 50,000,000 barrels more. In the Mid-Continent field the productive capacity is estimated at from 1,000 to 5,000 barrels per acre. In the remaining fields, outside of California, 1,000 barrels per acre is believed to be a sufficient allowance for the known fields.

"In California, very careful measurements by Mr. Arnold have resulted in an estimate of 8,500,000,000 barrels of petroleum stored in the rocks of that State, of which perhaps 5,000,000,000 barrels may be expected to be produced. Recognising that the amount of oil obtainable from these known fields is a matter largely of conjecture, it can only be based as above, upon what the fields have already yielded, and upon the thickness and relative porosity of the sands, but estimates of different authorities must vary between wide limits, and this should be borne in mind in considering the following table in barrels:—

	Minimum.	Maximum.
Appalachian field	2,000,000,000	5,000,000,000
Lima-Indiana field	1,000,000,000	3,000,000,000
Illinois field	350,000,000	1,000,000,000
Mid-Continent field	400,000,000	1,000,000,000
Gulf field	250,000,000	1,000,000,000
California field	5,000,000,000	8,500,000,000
Minor fields	1,000,000,000	5,000,000,000
Totals	10,000,000,000	24,500,000,000

THE PRODUCTION OF PETROLEUM.

"Production of petroleum in the United States has only been considered, statistically, since 1859. The production to that date incidental to the salt industry, and the occasional use of petroleum from springs for medicinal purposes, had no bearing on the industry which was to follow, except in one way. Sam Kier, of Pittsburg, had salt wells at Tarentum, from which he accumulated so much petroleum (more than fifty barrels) that he applied himself to the problem of developing a definite trade for it, and succeeded by means of introducing a lamp with a chimney. He also partly refined this petroleum. A. C. Ferris, also of Pittsburg, applying himself in the same direction, began the distribution of this oil to other cities, and the efforts of these two merchants created and maintained a demand which caused Colonel Drake to drill a well for petroleum at Titusville in 1859. In the course of the half century since the drilling of the drake well 1,806,608,463 barrels of petroleum, or 240,919,676 tons, have been produced, worth $1,654,877,685.

"New petroleum fields have been found and developed much more rapidly than the rate of decrease of production in the older fields. Therefore the rate of total production has shewn a rapid increase from a half million barrels in 1860 to 166,000,000 barrels in 1907.

"Varying with the compactness of the 'pay sand' and with the pressure of the gas accompanying the petroleum, the productive life of wells varies between the extreme limits of a few months on the one hand, to more than twenty years on the other. In many regions in Pennsylvania the hard and compact sandstones have resulted in wells of unusual long life, such wells having an initial production of from 50 to 500 barrels in the first twenty-four hours, and 'settling down' to a comparatively steady production of perhaps one-tenth of that amount. This has continued for years with gradual decline, and after even twenty years many of such wells are still being pumped with a production declining to one-tenth of a barrel per day. The other extreme, of short-lived wells is represented by the Spindle Top type, where, from very loose sands, wells have spouted many thousands of barrels in the first twenty-four hours, have shewn a correspondingly rapid decline, and have become exhausted and have been abandoned within six months to four years from the time they were drilled. The experience of petroleum producers in Pennsylvania has shewn seven years to be a fair average life of a well.

"The history of the production of petroleum shews that beginning with 1860 as much petroleum has been produced in each nine years as the entire product preceding this nine years. Continuing this rate of increase the next nine years would produce 1,800,000,000 barrels, making the total amount extracted up to 1916, 3,600,000,000 barrels. In 1925 the amount extracted would reach 7,200,000,000, and in 1934, 14,400,000,000 barrels, and nine years more, 1943, would bring the total to almost the maximum amount estimated as obtainable from the present fields. Concerning the probability of such a rate of increase in production, one must consider the causes for the great increase in the past years. The vital factor has been the case with which any quantity of oil could be sold for cash, at any time, and for prices ordinarily much above the cost of production. This ready market has not been seriously disturbed even by the greatly increased production of the past few years. The second reason is based upon the liquid character of the product. With the discovery of each new field, the territory is divided into many lease-holdings, frequently small in size. In pumping from one lease, petroleum is apt to flow in from a rival interest. It is therefore necessary for each lessee to get his share before it flows away to drained territory. It is impossible to prevent the consequent rapid depletion of a field without a combination of all the interests, or by limiting, by statute, the amount that each producer shall extract, per acre, within a specified time.

(To be concluded).

WHERE ENGLISH DRILLING TOOLS ARE MADE.

A Visit to the Works of the Deep Well Tool and Boring Company, Ltd., at St. Albans.

It is just about two years ago since the Deep Well Tool and Boring Co. established their extensive works at St. Albans for the manufacture of all classes of boring tools, and it says much for the remarkable headway they have since made, that the works have already been found far too small for actual requirements. As a consequence, several extensions are now being made, and it was over these, as well as over the older portions of the firm's premises, that a Review representative had the pleasure of an inspection a few days ago.

Until the establishment of the Deep Well Tool and Boring Co. at St. Albans, practically the whole of the tools and other appliances necessary for the boring of oil wells, had to be contracted for in foreign countries, and the orders which the firm have lately executed for even most remote countries, is conclusive evidence that the manufacture of such tools in England is filling a long-felt want. Large shipments of rigs and tools have been consigned to the Argentine Republic, Trinidad, Portugal, South Africa, Egypt, India, Persia, the West Coast of Africa, Australia, and other places where oil is either being produced or exploited for, and at the present time other substantial orders are passing through the works for delivery within a few months.

General View of the Works from the Railway.

The works, it might be here mentioned, are erected upon a very favourable site just outside the St. Albans City boundary, and run parallel with the main line to the north of the Midland Railway, from which, in order to secure the greatest dispatch of orders, they are connected by a private siding.

The extensions to the works, now going up, occupy a site between the main road and the older works, and go to form part of what is expected will be still greater enlargements of the works. The pressure upon the space in the finishing and erecting shop has become so great that it has been found necessary to devote a new building to part of this work, while, for the same reason also, the offices are now to be quite separate from the shops. Within the past few months, the concern has been registered as a limited company.

The present staff includes thoroughly-experienced men drawn from Canadian and Continental firms, and each member is thoroughly conversant with the manufacture of well drilling tools, while the founders of the firm, as we already mentioned in the Review, have been long associated with the oil industry, having operated in many oil fields.

It is their long experience in the manufacture of boring tools in Canada which led them to establish the works in England, thus being most advantageously situated on the one hand for the supply of their raw materials from the English steel and iron makers, and on the other hand for the delivery of their drilling rigs and tools to English companies operating in the Colonies or foreign countries. There are also on the staff members who have had wide practical experience of boring oil wells in most of the oilfields of the world.

We would congratulate this firm upon the success which has so far attended their efforts, but of this we had no doubt from the first, for early in 1907 we pointed out in the Review that as practical oil men they were in a unique position to manufacture drilling tools, and were bound to immediately command a large and influential *clientele* in various parts of the world.

SIR W. G. ARMSTRONG, WHITWORTH & Co., Ltd.,

Walker Shipyard, Newcastle-on-Tyne.

The following OIL TANK STEAMERS have been constructed at the Walker Shipyards during the past Quarter of a Century.—

No.	Name.	Gross Tonnage.	I.H.P.
473	Glückauf	2,297	992
500	Vorwarts	2,466	994
501	Minister Maybach	2,485	1,000
502	Wilkommen	2,895	1,300
506	Ville de Calais	1,836	850
507	Oural *ex* Hans and Kurt	2,158	850
511	Paula	2,675	1,000
519	Ioannis Coutzis *ex* Caucase	1,644	800
521	La Hesbaye *ex* Oevelgonne	2,539	1,050
522	Gutheil	2,737	1,200
523	Elbruz	2,715	1,200
524	Suwanne *ex* Kasbek	2,707	1,200
526	Lux	1,635	750
527	Sophie	1,362	650
535	Genesee *ex* Dariel	2,767	1,200
537	Russian Prince	2,717	1,200
538	Phosphor	2,023	900
539	La Flandre	1,979	900
540	Energie	2,765	1,200
549	Lumen	2,357	950
550	Elsie Marie	3,194	1,250
553	Burgermeister Petersen	2,794	1,200
554	Standard	2,765	1,200
555	Kura	2,372	1,200
557	Oranje Prince	1,868	800
558	Bear Creek	2,411	1,000
559	Beacon Light	2,763	1,200
560	Geestemünde	2,750	1,200
561	Ville de Douai	1,872	850
562	Ewo	423	400
563	Helgoland	2,397	1,200
567	Brilliant	3,162	1,550
574	Weehawken	2,784	1,350
577	Aral	2,826	1,350
587	Azov	2,332	1,000
591	Diamant	3,525	1,600
592	Mannheim	3,507	1,600
593	Lucerna	3,242	1,550
594	*Le Progres	449	440
597	Baku Standard	3,708	1,600
598	Etelka	2,373	1,200
599	El Gallo	632	550
600	Cadagua	2,394	1,200
603	Euplectela	3,918	1,750
604	James Brand	3,907	1,750
606	Tonawanda *ex* Lucigen	3,416	1,800
607	Le Coq	3,399	1,800
608	Snowflake	2,710	1,450

No.	Name.	Gross Tonnage.	I.H.P.
611	Georgian Prince	3,246	1,200
613	Mamedshakh	552	360
632	Nerite	4,893	2,300
633	Cowrie	4,893	2,300
642	Borjom	2,874	1,750
658	*Samarkand	976	800
659	Mechti	789	650
664	*Rasoul	997	800
666	*Usenia Manafoff	1,040	1,800
677	Trigonia	1,667	1,000
678	Haliotis	1,659	1,000
683	Asia	1,168	900
685	Daghestan	2,818	1,500
691	Oriflamme	3,764	1,900
692	Luciline	3,765	1,900
693	Saxoleine	3,737	1,900
695	Strombus	6,030	3,100
696	Cardium	6,068	3,100
697	Bulysses	6,069	3,100
704	Tiflis	2,816	1,500
705	Pinna	6,288	3,100
706	Makkavei	1,651	1,000
707	Khodoung	1,457	1,050
717	Kinsman	4,534	2,100
720	Rossija	3,983	1,900
721	Pure Oil	4,487	2,350
722	Tuscany	4,006	1,900
723	Silverlip	7,492	3,300
724	Lucigen	4,527	2,300
726	Cymbeline	4,505	2,350
727	Twingone	1,771	2,900
742	Singu	3,037	1,450
749	Beme	3,036	1,400
758	Nerite	2,042	1,250
771	No. C. 119	337	—
772	No. C. 158	337	—
773	No. C. 81	337	—
776	Hermione	4,500	2,350
781	San Christobal	2,040	1,250
801	Oberon	4,895	2,600
802	Carpathian	4,645	2,600
803	Roumanian	4,645	2,600
804	Buyo Maru	4,820	2,600
805	Derbent	3,020	1,800
806	Joyo Maru	4,895	2,600
807	Hyrcania	4,700	2,600
808	El Lobo	4,200	2,450
813	Minhla	1,325	820
814	Lucigen	4,954	2,600

* Vessels marked thus are Twin Screws.

London Office:—**22, BILLITER STREET, E.C.**

The American Oil Market.

New York, Week ended Jan. 30th.

Advices from our correspondents in the Eastern fields indicate more effectively the obstacles to operations that are incident to the winter, a condition that is usually experienced much earlier in the season than has been the case this year. Probably the most favourable showing of the week is to be credited to the fields comprising the Pennsylvania classification, where the work has been prosecuted with about the same degree of activity. In this section West Virginia results have been more encouraging, says the *Oil Paint and Drug Reporter*, and the new production has scored an increase, fewer dusters having been encountered. Lincoln county has been the scene of continued successful completions, and probably no other district in the fields yielding the highest grades of crude can approach Lincoln county in the regularity of its producing wells. All of the eight wells drilled during the week contributed to this favourable record, the aggregate capacity being 220 barrels daily. Ritchie county in the same State maintains an important position, four of the five wells completed within the week having a combined daily average of 550 barrels. Operations in Brooke county attract comparatively little attention, and the average of the successful wells for the week was below 25 barrels. Some new work was said to be in progress in the Wellsburg district of the county. Wildcat ventures are reported in Cabell and Putnam counties of West Virginia, but so far there has been apparently nothing to justify this experimental drilling. While a greater number of completions is credited to Southeastern Ohio than was formerly noted, the new production for the current week is materially below that previously recorded, dry holes representing a much larger proportion in the returns for the week. An exceptional producer was encountered in Fairfield county, reported good for 150 barrels per day. Columbiana county furnished a 40-barrel well within defined territory. The Alliance pool in that county has now been well defined. In the Lima field of Indiana and Southwestern Ohio operations are especially active in Wood county, where extensions to the old producing limits have now been developed. In the Indiana end of the field there was little to reward operators, and the new production for the week is comparatively light. A marked decrease is noted in the week's returns from Illinois, completions being nearly one-half as many as previously reported, and a more than proportionate decline being experienced in the new production. A favourable development was realised, however, in the announcement that the principal pipe line company of the State would be in a position to handle all of the crude from the fields, storage stocks having been materially reduced. This will relieve what has been for a considerable time a discouraging condition in development work throughout the State. Kentucky advices report that operations have been generally stimulated in the lower fields of the State, but completions so far remain within the defined districts of Wayne and Wolfe counties. Our Mid-Continent correspondent writes of the desperate state of mind of the producers there owing to the hostility that has been encountered from State and Federal authorities toward plans for the extension of pipe-line facilities so that an adequate outlet might be afforded for the increasing stocks of crude, and attempts to effect a general shut down in the field are hinted at, pending a meeting of the producers to discuss the situation. The total production of the Mid-Continent field for 1908 is given as 48,274,782 barrels, probably leading every other field of the country. The previous year's output aggregated 46,846,267 barrels. Our correspondent believes that the 1909 production would reach 75,000,000 barrels, if suitable facilities for providing for the output could be obtained.

Refined and Products.—The substantial gain in the export movement constitutes about the only feature of the local market for refined during the interval. Our record of clearances for the week comprises 15,027,700 gallons, of which 12,334,380 gallons were carried by the tank fleet. The former export total aggregated 8,300,010 gallons. There was a heavy export movement in naphtha for the week, amounting to 962,310 gallons, against 214,800 gallons as the former aggregate.

CLOSING QUOTATIONS.

Crude at the Wells.

The quotations for oil represented by credit balances were :—

	Week ended	
	Jan. 30. 1908.	Jan. 30 1909.
Pennsylvania	$1 78	$1·78
Tiona	1·78	1·78
North Lima	0·94	1·04
South Lima	0·89	0·99
Indiana	0·89	0·99
Illinois, heavy, below 30 deg. ..	0·60	0 60
Kansas and Indian Ter., 32 deg. and above	0 41	0·41
Heavy	0·28	0·28
Humble, Tex.	0·75	0 53
Saratoga	0·73	0·53
Sour Lake, Tex.	0·77	0·53
Jennings, La.	0·72	0·55
Canadian Oil :—		
Petrolia	1·34	1·44
Oil Springs, less pipeage	1·41	1·51

Refined—For Export.

In cents.		Week ended Jan. 30.	
		S.W. 110 test.	W.W. 150 test.
Barrels, cargo	per gal.	8·50	@10·00
Philadelphia	..	8·45	@ 9·95
Bulk, New York	..	5·00	@ 6·50
Bulk, Philadelphia	..	4·95	@ 6·45
Cases, New York	..	10·90	@12·40
Cases Philadelphia	..	10 85	@12·35

Refined in Cases—110 Fire Test.

	Week ended	
	Jan. 23. 1909.	Jan. 30. 1909.
3,000 to 10,000	11·05	11·05
1,000 to 3,000	11·10	11·10

Refined—Jobbing Lots.

In barrels, pkgs. included.

		Week ended	
		Jan. 23.	Jan. 30.
120 fire test, S.W. ..	in barrels	12	12
130 fire test, S.W. ..	.. ..	12½	12½
150 fire test, W.W. ..	.. ..	13½	13½
In bulk from tanks	.. ..	10	10
300 fire test	.. ..	13¼@14	13¼@14

Naphtha and Gasolene.

	Week ended	
	Jan. 23.	Jan. 30.
Naphtha, V. M. and P. deod. ..	13·00	13·00
Gasolene, 86 deg.	23·00	23 00

Pennsylvanian Oil Runs from Jan. 21st to Jan. 27th were :—Jan 21st, 197,071* ; Jan 22nd and 23rd, 251,343* ; Jan. 24th, 266,903* ; Jan. 25th, 85,038 ; Jan. 26th, 520,431 ; and Jan. 27th, 218,941*.

* Includes Illinois Oil.

The Deliveries of Pennsylvanian Oil from Jan. 22nd to Jan. 28th were:—Jan. 22nd, 179,536* ; Jan. 23rd and 24th, 290,251* ; Jan. 25th, 195,678* ; Jan. 26th, 161,905* ; Jan 27th, 172,169* ; and Jan. 28th, 202,645*.

* Includes Illinois Oil.

Clearances for the Week.

During the week ended Jan. 29th and since Jan. 1, the clearances of petroleum, in gallons, from the port of New York, were as follows :—

	Week.	Year.	1908.
Refined	15,027,700	43,864,790	49,115,250
Crude	—	1,984,410	4,700
Naphtha	962,310	1,659,340	372,100
Residuum ..	16,250	46,250	437,700

Export Statistics.

The total exports from the port of New York and from the United States have been :—

	Gallons.
From New York, week ended Jan. 29th ..	20,036,933
Total from New York, from Jan. 1st, 1909 ..	60,470,796
Same period last year	65,491,701
Decrease	5,020,905
From United States, week ended Jan. 29th	33,911,830
Total from United States, since Jan. 1st, 1909	112,904,212
Same period last year	119,135,263
Decrease	6,231,051

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The "Review" Shipping List.

February 12, 1909.

(*The following abbreviations are used in this table:*—L. Left; P. Passed; Arr. Arrived; Sp. Spoken; Tr. Trading.)
Anglo-American Co.'s vessels marked thus (□): the Anglo-Saxon Co.'s tankers thus (*): and Messrs. Lane and Macandrew's thus (†).

Vessel.	From.	For	Latest Date and Position.
ALCHYMIST	Selzaete	Lisbon	Sd. Terneuse, Feb. 2
ALICE ET ISABELLE (Fr. bq.)	New York	Rouen	Arr. Dec. 16, in Pt. Jan. 18, laid up
AMERICAN	New York	Puerto Mexico	L. Jan. 30
APPALACHEE □	Algiers	Kustendje	L. Feb. 3
APSCHERON	Trieste	Constant'ple	L. Feb. 3
ARAL	Philadelphia	Marseilles	Arr. Feb. 7, in Port, Feb. 9
ARAS	Batoum	Amsterdam	L. Feb. 6
ASHTABULA □	San Francisco	Moji	At Yokohama, about Feb. 10
ASTRAKHAN	Philadelphia	Dover	P. Del. Break, Jan. 25
AUGUSTA	Puerto Mexico	London	To sail Jan. 26
AUGUST KORFF	Manchester	Philadelphia	Arr. Feb. 8
AUREOLE	Port Arthur (Texas)	Antwerp & London	Cld. Norfolk (Va.), Feb. 2
BAKU STANDARD	Ely Harbour	Cardiff	Arr. Jan. 24, in Port, Feb. 9
BALAKANI†	Hamburg	Port Arthur (Texas)	P. Dover, Feb. 10
BATOUM	Singapore	Channel	L. Jan. 25
BAYONNE	Naples	Batoum	L. Feb. 3
BEACON LIGHT	Kustendje	Rouen	Arr. Feb. 10
BLOOMFIELD	Port Arthur (Texas)	Manchester	Sd Norfolf (Va.), Jan. 29
BORJOM	Alexandria	Batoum	S. Constant'ple, Feb. 5
BRILLIANT	Philadelphia	Copenhagen	L. Feb. 6
BROADMAYNE	Kustendje	Vallo	Sd. Dartmouth, Feb. 3
BULLMOUTH*	Freshwater	Shanghai	L. Feb. 3
BULYSSES*	Singapore	Saitozaki	Arr. Feb. 5
BURGERMEISTER PETERSEN	Stettin & Tyne	Philadelphia	P. Dunnet Head, Feb. 2
BUYO MARU	Sabine Pass	Yokohama (via Suez)	At Singapore about Jan. 21
CADILLAC	New York	Barrow	Arr. Feb. 8
CALCUTTA (B. b.) □	San Francisco	Tsingtan	Arr. Jan. 30
CAPTAIN A. F. LUCAS (with S.O. Barge 95)	Hamburg	New York	Arr. Feb. 1
CARDIUM*	Batoum	Alexandria	Arr. Feb. 7
CARPATHIAN†	Port Arthur (Texas)	Antwerp	L. Feb. 10
CAUCASIAN†	Pera	London	L. Feb. 6
CHARLOIS	Philadelphia	Amsterdam	P. Reedy Island, Feb. 1
CHESAPEAKE □	Kurrachee	Singapore	L. Feb. 7
CHESTER	Antwerp	Kustendje	L. Feb. 4
CHEYENNE	New York	Savona	Arr. Jan. 31, sd. Const'ple, Feb. 2
CITY OF EVERETT (with S O. Barge 94)	Boston	Philadelphia	Sd. N.Y., Jan. 25
CIUDAD DE REUS	Rouen	New York	L. Feb. 4
CLAM*	Singapore	Saitozaki	L. Feb. 3
CLEMATIS	Tyne	Fernandina	Arr. Feb. 8
COALTAR (s.)	Cork	Selzaete	Arr. Feb. 6
COL. E. L. DRAKE	—	—	Coasting U.S. and Pacific
COWRIE*	Balekpappan	Shanghai	L. Feb 4
CUYAHOGA □	Hiogo	New Orleans	To sail Hiogo, Feb. 15
CYMBELINE	Bordeaux	Newport	Arr. Jan. 29, in Port, Feb. 9
CZAR NICOLAI II.	Hamburg	Batoum	L. Feb. 7
DAGHESTAN	Hamburg	Tyne & Batoum	L. Feb. 10
DAKOTAH □	Manila	Kobe and San Francisco	Arr. Feb. 3
DELAWARE □	Manchester	Liverpool	Arr. Feb. 4, in Port, Feb. 10
DERBENT	Antwerp	Batoum	L. Feb 4
DEUTSCHLAND	Cette	New York	Arr. Feb. 5
DIAMANT	Stettin	Philadelphia	Arr. Feb. 10
EDWARD DAWSON	New Orleans	Port Arthur	Sd. Port Eads, Jan. 30
EL. X*	Kobe	Palembang	L Jan. 24
EL LOBO	Port Arthur	Campana	Arr. Feb. 7
ENERGIE	Danzig & Tyne	Philadelphia	At Del. Break., Feb. 7
ERIVAN	Tyne	Batoum	P. Flambro' Hd., Feb. 7
ETELKA	Marseilles	Batoum	L. Feb. 5
EUPLECTELA*	Tyne	Kustendje	P. Dover, Feb. 8
EXCELSIOR	New York	Nordenhamn	L. Feb. 2
FRANCE MARIE (French bq.)	Philadelphia	Cette	P. Cape Spartel, Jan. 26
GEESTEMUNDE	Copenhagen & Tyne	Philadelphia	Arr. Feb. 7
GENESSE □	Sunderland	New Orleans	Arr. Feb. 10
GEORGIAN PRINCE	Cardiff	Philadelphia	L. Feb. 6
GOLDMOUTH*	London	Batoum	P. Gibraltar, Feb. 8
GUTHEIL	Philadelphia	Christiana	L. Feb. 4
HAINAUT (Du. sh.)	New York	Antwerp	L. Jan. 31
HARRY WADSWORTH	Norfolk (Va.)	Liverpool	L. Jan. 26
HELIOS	New York	Rouen	P. Lizard, Feb. 10
HERMIONE	Hamburg	Tyne	Arr. Feb. 8, in Port, Feb. 9
HESPERUS □	New York & Rotterdam	Copenhagen	Arr. Feb. 8
HESPERUS	Honfleur	Tyne	Arr. Nov. 25
HOTHAM NEWTON	Kustendje	Marseilles	L. Feb. 3
HYRCANIA	London	Batoum	P. Gibraltar, Jan. 29
IOANNIS COUTZIS	Batoum	Rouen	Arr. Feb. 8
IROQUOIS □ (towing barge Navahoe)	New York & Del. Break.	London	Arr. Feb. 10
J. B. AUG. KESSLER	Singapore & Port Natal	Barrow	Arr. Feb. 9
JAMES BRAND	Port Arthur (Texas)	London	P. Cape Heury, Jan. 27
JOYO MARU	Cardiff	Port Arthur	P. Barry Island, Jan. 23
JULES HENRI (French bq.)	Marseilles	Philadelphia	P. Tarifa, Jan. 1
KURA	Newport	—	L Feb. 9
LA CAMPINE	Antwerp	New York	L. Jan. 27
LA FLANDRE	Ghent	Philadelphia	At Fayal, Jan. 25
LA HESBAYE	Antwerp	Philadelphia	P. Dover, Feb. 10
LACKAWANNA □	Alexandria	Kustendje	L. Feb. 7
LANSING	Pt. San Luis	San Francisco	Arr. Jan. 16
LE COQ†	Santander	Vigo	L. Feb. 9
LOUTSCH	Batoum	Havre	Anchrd. Gallipoli, Jan. 25
LUCERNA	Brunsbuttelkoog	Tyne	Arr. Feb. 6, in Port, Feb. 9
LUCILINE†	Rouen	Batoum	P. Pera, Feb. 9
LUMEN	Ghent	Tyne	Arr. Jan. 5, in Port, Feb. 9
LUTETIAN†	Del. Break	Havre	Arr. Feb. 9
LUX†	Pera	Cette	L. Feb. 9
MAKKAVEI	Batoum	Odessa	L. Jan. 24
MANHATTAN	New York	Malta	Arr. Feb. 10
MANNHEIM	Hamburg	New York	Sd. Tyne, Feb. 2
MARGARETHA	Kustendje	Hull	Arr. Feb. 3
METEOR	Vladivostock	Batoum	Sd. Constant'ple, Feb. 2
MEXICAN PRINCE	Christiana	Stockton	Arr. Jan. 19, in Port, Feb. 8
MIRA	—	—	In Port Blyth, Jan. 26, laid up
MUREX*	Lobitos	—	L. Jan. 24
NARRAGANSETT □	New York	London	Off S. Foreland, Feb. 11
NEWYORK	New York	Rotterdam	L Feb. 4
NIAGARA	Moji	San Francisco	Arr. Feb. 5
OBERON	Penarth	Port Arthur	L. Jan. 22
OCEAN	Batoum	Antwerp	S. Constant'ple, Jan. 27
OILFIELD	New York & Bordeaux	Tyne	Arr. Dec. 10, in Port, Feb. 9
OKLAHOMA	Port Arthur	New York	160 mls. S. Sandy Hook, Jan. 29

Vessel.	From.	For.	Latest Date and Position
ORIFLAMME†	Cette	Philadelphia	P. Gibraltar, Jan. 30
OTTAWA □	Philadelphia	Plymouth & Manchester	P. Del. Break., Jan. 30
OURAL	St. Louis (Rhone)	Batoum	L. Feb. 6
PAUL PAIX	Batoum	Zeebrugge	P. Gibraltar, Feb. 9
PAULA	New York	Hamburg	Arr. Jan. 12, in Port, Feb. 7
PECTAN*	Manchester & Amsterdam	New Orleans	P. Lizard, Feb. 6
PENNOIL	Tyne	Philadelphia	L. Jan. 30
PETROLEINE	Cette	Philadelphia	P. Gibraltar, Feb. 8-9
PHOEBUS	New York	Hamburg	L. Jan. 31
PINNA†	Yokohama	Payta	L. Jan. 15
POTOMAC □	New York	Birkenhead	Arr. Jan. 23, in Port, Feb. 10
PROGRESSO ARGENTINA (Ar. bq.)	Buenos Ayres	Port Arthur (Texas)	Arr. Jan. 12
PROMETHEUS	Clyde	Yokohama	At Batavia, Jan. 29
PRUDENTIA	Hull	New York	Arr. Feb. 1
PURELIGHT	Philadelphia	Dover	P. Del. Break. Jan. 31
QUEVILLY (Fr. bq.)	New York	Rouen	Arr. Feb. 8
RENDOVA (Br. bq.)	Philadelphia	Seville	P. Del. Break., Jan. 23
RION	Philadelphia	London	L. Feb. 8
ROCK LIGHT†	London	Galveston	P. Lizard, Feb, 10
ROMANY*	Singapore	Kobe	Arr Feb. 4
ROTTERDAM	New York	Amsterdam	L. Feb 2
ROUMANIAN†	London	Tyne	L. Feb 11
RUSSIAN PRINCE	Cienfuegos	Liverpool	L. Jan. 23
SALAHADJI	Balekpappan	Pladjoe	L. Jan. 6
SAN CRISTOBAL	Port Arthur (Texas)	Liverpool	P. Cape Henry, Jan. 26
SAN IGNACIO DE LOYOLA (Sp. bq.)	Pasages	Philadelphia	L Dec. 31
SANTA MARIA	Port Harford	Tocopilla & Tatal	L. Jan. 27
SANTA RITA	Guatemala	Port Harford	Arr. Jan. 26
SARANAC □	Tyne	New York	L. Feb 10
SAXOLEINE	Rouen	Tyne	Arr. Feb. 9
SCHUYLKILL	New York	Batavia	Arr. Jan. 17
SEMINOLE □	New York	West Indies	Sd. Porto Plata, Jan. 22
SERVIAN†	Newp't News	Antwerp	L. Jan. 30
SNOWFLAKE	Bergen	Tyne	Arr. Jan. 23, in Port, Feb. 9
SOYO MARU	Port Arthur (Texas)	Yokohama	Cld. Singapore, Dec. 1
SPONDILUS*	Scesoe	Samboe	Arr. Feb. 5
STANDARD	Hamburg	Havana	P. Prawle Pt., Jan. 22
STROMBUS*	Batoum	Colombo	P. Perim, Jan. 31
SULTAN VAN LANGKAT	Freshwater	Shanghai	L. Jan. 15
SUN	Newport Nws	Sabine Pass	L. Jan. 28
SUNLIGHT (Br. bq.)	Dunkirk	Port Arthur (Texas)	?Sp Jan. 12, 37 N. 20 W.
SURAM	Manchester	Newport	P. St. Anne's Hd., Feb. 10
SUWANEE □	Sunderland	Tyne	Arr. Jan. 10, in Port, Feb. 9
SVIET	—	—	Trading Levant and Black Sea
TAMARC □	London	Tyne	Arr. Feb. 5, in Port, Feb. 9
TELENA*	Sabang & Rotterdam	Thameshaven	Arr. Feb. 7, in Port, Feb. 10
TEREK†	Philadelphia	Manchester	Arr. Jan. 15
TEXAS	Sabine Pass	Avonmouth	P. Sand Key, Jan. 31
TIFLIS	Batoum	Antwerp	P. Sagres, Feb. 7
TIOGA □	Liverpool	New Orleans	P. Sand Key, Feb. 10
TONAWANDA □	San Francisco	Moji	L. Jan. 27
TRINCULO	Cardiff	Port Arthur (Texas)	L. Feb. 8
TROCAS	Rangoon	Calcutta	Arr. Feb. 2
TUSCARORA	San Francisco	Moji	At Yokohama, Feb. 3
VEDRA	Singapore	Kobe	L. Jan. 27
VILLE DE DIEPPE (Nor. bq.)	Philadelphia	Rouen	P. Reedy Island, Jan. 17
VOLUTE	Balekpappan	Kurrachee & Bombay	Sd. Samboe, Feb. 4
WASHINGTON	Hamburg	Baltimore	Arr. Feb. 6
WASHTENAW	Pt. San Luis	San Francisco	Arr. Jan. 20
WEEHAWKEN	Plymouth	New York	Arr. Feb. 9
WILLKOMMEN	Philadelphia	Stockholm	L. Feb. 2
WINNEBAGO	—	—	Coasting U.S. and Pacific

Latest Market Intelligence.

LONDON OIL MARKET.

Supplied by Messrs. Benjamin & Gee, 31, St. Mary Axe, E.C.

Feb. 12th, 1909.

With the exception of Roumanian Oil which remains very firm the other qualities declined ¼d. on Thursday, the latest quotations being as follows:—Russian, 6d.; American, 6⅞d.; Water White, 7⅞d.; Roumanian, 7d.

LUBRICATING OILS

Are unchanged as follows:—

American pale, £6 10s. to £10 10s.
American dark cylinder, from £8.
American filtered cylinder, from £11 5s.
No. 1 Russian, for Spot, £8 7s. 6d.

TURPENTINE.

American Turpentine has been fluctuating as usual, and since our last report has seen lower prices than are now quoted:—For Spot, the latest price is 30s. 3d.; March to April, 30s. 6d.; May to August, 31s.; July to December, 31s. 9d.

LIVERPOOL OIL MARKET.

Feb. 11th.

Refined oils are quiet, and sellers quote 6¾d., for Russian, Galician or Roumanian; and 7¼d. to 8¼d. per gallon for American.

Petroleum Spirit continues at 1s. 0d. to 1s. 1½d. per gallon for American deodorised, according to quality on the spot.

LATEST AMERICAN PRICES.

New York, Feb. 11th.

Refined, in cases, is steady at 10·90; Standard White, 8·50; Credit balances, 1·78c.

Philadelphia, Feb. 11th.

Standard White is now quoted at 8·45.

RUSSIA.

Baku, Feb. 8th.

The Baku oil market is firm. Crude oil, spot, 20½ copecs per pood. Residuals, 20⅞ copecs. Kerosene, in ships, 28 copecs.

BELGIUM.

Antwerp, Feb. 3rd.

The petroleum market is firm. Price of Standard White, spot, 22 francs per 100 kilos; March, 22¼.

FRANCE.

Paris, Feb. 3rd.

Illuminating oil is quoted in bulk, in whole tank waggons, 25 francs per hectolitre; spirit, 33·75 francs per hectolitre. Special white oil, in barrels or cans, 33 francs per hectolitre.

GERMANY.

Hamburg, Feb. 8th.

The kerosene market is firm. The price of American Standard White is 7.70 marks per 50 kilos.; Galician, 7.35 marks.

HOLLAND.

Amsterdam, Feb. 6th.

The petroleum market remains firm. American Standard White, spot, 12·20 florins per 100 kilos.

ROUMANIA.

Feb. 2nd.

	Francs.
Crude oil from different fields, including pipe line charges, per 100 kgs.	4·50–4·70
Refined oil, exclusive of taxes, ex. refinery	8·70
Benzine, 717–720, including taxes	20·00
Benzine, 750–760	15·00–15·50
Residuals in tank waggons, at refinery	4·30– 4·35
Paraffin	120·00

Prices for Export.

Refined oil, f.o.b., per 100 kgs.	7·25–7·75
Benzine, sp. gr. 0·710–0·715, f.o.b.	17·00–18·00
„ sp. gr. 0·715–0·720 „	14·50–15·50
„ sp. gr. 0·730–0·740 „	10·00–11·00
„ sp. gr. 0·745–0.755 „	9·00–10·00

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IMPORTS of PETROLEUM into UNITED KINGDOM

Specially prepared for this Journal by the Custom House.

FOR THE WEEK ENDED 1st FEBRUARY, 1909—

Date.	Port and Importers.	Description.	No. of Gals.	Port Whence.
Jan.	LONDON—			
26	British Petroleum Co. (Rocklight)	Gas	1,272,800	Kustendje
26	J. Johnson	Lub.	2,000	Trieste
26	M. Record	"	6,000	"
26	Page, Son and East.. ..	Lub. Oil and Gr.	360	Antwerp
26	A. Brown and Co.	Lub.	2,000	"
27	London and India Docks Co.	"	1,980	Hamburg
27	Van Dam and Co.	Tar Oil	2,540	Rotterdam
27	Mordaunt Bros	Lamp	10,000	Hamburg
27	London and India Docks Co.	Lub.	20	"
27	Asiatic Petroleum Co.	Lamp	400	Pulo Samboe
27	"	Batch. Oil	80	"
27	"	Fuel	80	"
27	Fielder, Hickman and Co...	Lub.	8,200	New York
27	Scott's Wharf	"	6,000	"
28	Page, Son and East ..	"	80	Antwerp
28	G. Haller and Co	Lub. Gr	130	"
28	Lub. and Fuel Oils Co. ..	Lub	295,000	Batoum
28	O. Gerdes, Hansen and Co.	L. Resid.	2,490	Trieste
29	J. Harrison	Lub. Gr.	230	Antwerp
29	R. Park and Co.	Lub.	890	Marseilles
29	Anglo-American Oil Co. ..	"	3,960	New York
29	Bowring Petroleum Co. (Trinculo)	Lamp	433,150	Philadel.
30	A. Brown and Co.	Lub.	2,400	"
30	Anglo-American Oil Co. ..	"	14,000	New York
30	T. H. Lee	Lub. Gr.	20	Hamburg
30	London & India Docks Co...	Lub.	960	"
30	Schlieman's Oil Co. ..	Lub. Gr.	2,380	"
30	"	Lub.	3,100	"
Feb.				
1	British and Foreign Wharf..	"	600	Antwerp
1	Vacuum Oil Co, ...	"	200	Fiume
1	Mercantile Lighterage Co.	"	1,990	New York
1	Langley, Smith and Co. ..	"	2,400	Philadel.
Jan.	LIVERPOOL—			
26	J. T. Fletcher and Co. ..	Lub. Gr.	3[illegible]0	Antwerp
26	G. B. Taylor	Lub.	16,600	New York
26	American Express Co ..	"	110	"
26	Anglo-American Oil Co. (Delaware)	Lamp	269,980	Philadel.
27	A. E. Bennett and Co. ..	Lub. Oil and Gr.	200	Antwerp
28	Bowring Petroleum Co. ..	Lub.	2,140	Philadel.
28	"	"	1,400	"
28	Crew, Levick and Co. ..	"	19,920	"
28	" ..	Resid.	2,410	"
28	" ..	M. Colza	12,400	"
28	A. Hopps and Sons.. ..	Lub.	6,360	"
28	Meade-King, Robinson & Co.	"	58,240	"
28	G. B. Taylor	"	23,200	"
28	W. B. Dick and Co. ..	Lub.	10,260	Philadel.
28	Worthington and Boler ..	"	4,000	"
28	D. Currie and Co.	Lub. Gr.	160	Hamburg
28	Pickfords	Lub. Oil and Paste	560	"
28	Bramwell, Fern and Co. ..	Lub.	1,000	Philadel.
29	W. B. Dick and Co. ..	"	18,420	"
29	H. W. Peabody and Co. ..	"	40	"
30	Meade-King, Robinson & Co.	"	23,480	Baltimore
30	" "	Lub. Gr.	7,800	"
30	American Line	Lub.	4,500	Philadel.
30	Shropshire Union Rail. Co.	"	850	"
Feb.				
1	A. Hopps and Sons	"	2,710	Baltimore
1	W. Gibson and Sons ..	Lamp	2,050	Boston
1	C. C. Wakefield	Lub. Gr.	1,190	Antwerp
Jan.	BRISTOL—			
26	H. Pritchard and Co. ..	Lub.	2,100	New York
26	H. R. James and Son ..	"	17,080	"
26	" ..	M. Colza	16,000	"
26	J. and R. Bush	Lub.	51,960	"
29	H. Matthews and Co. ..	"	320	Hamburg
29	Pickford's, Ltd.	Lub. Oil and Paste	190	"
	GRIMSBY—			
26	J. Sutcliffe and Son	Lub.	350	"
26	"	"	120	Antwerp
	HARWICH—			
29	D. Howard	"	300	"
	HULL—			
28	Wilsons and N.E. Co. ..	"	1,200	Hamburg
28	"	Lamp	760	"
28	N. Veltman and Co. ..	Lub.	120	Bremen
28	T. Wilson, Sons and Co. ..	"	1,200	Reval
29	Wilsons and N.E. Co. ..	"	1,080	Antwerp
	MANCHESTER—			
27	Liverpool Storage Co. ..	"	21,560	New York
27	J. T. Fletcher and Co. ..	"	120	Antwerp
22	(By qy.) W. Hodgson and Co	"	7,520	Riga
28	Schofield and Co. . ..	"	800	Hamburg
28	D. Currie and Co.	Lub. Gr.	50	"
29	Anglo-American Oil Co. (Delaware)	Lamp	1,024,040	Philadel.
	MIDDLESBRO'—			
26	E. Harris and Co.	Lub.	280	Antwerp
	NEWCASTLE—			
28	Tyne-Tees Steamship Co. ..	"	120	Hamburg
	ABERDEEN—			
26	R. C. Reid and Co... ..	Lamp	6,000	"
	GLASGOW—			
26	Clyde Shipping Co. ..	Lub Gr.	700	Antwerp

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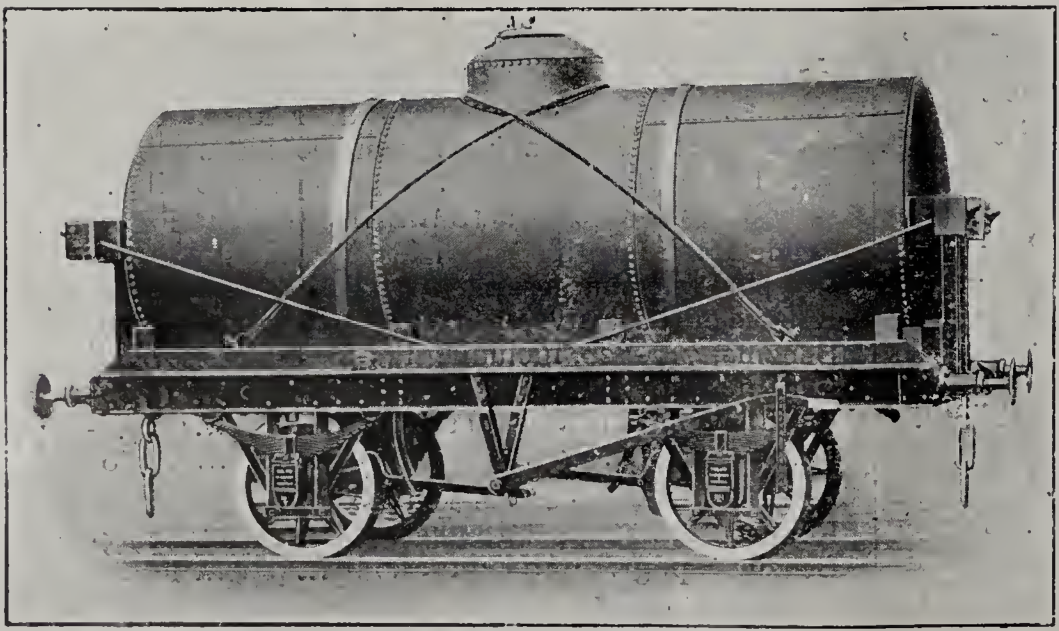

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"GRIP" Soldering Fluid.
No corrosive fumes given off. Prevents rust at the joints and consequent leakage. Stronger work. Less solder required.

IMPORTS.—(*Concluded*).

DATE.	PORT AND IMPORTER.	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
Feb.	GLASGOW—			
1	J. and A. Allan	Lub.	46,800	Philadel.
1	,,	M.Colza	2,250	,,
Jan.	GRANGEMOUTH—			
26	W. Graham-Yooll and Co.	Lamp	4,000	Hamburg
26	J. Currie and Co.	Lub. Oil and Paste	2,670	,,
Feb.				
1	W. Graham-Yooll and Co.	Lamp	1,000	,,
Jan.	LEITH—			
28	Geo. Gibson and Co.	Lub.	3,120	Antwerp
28	W. Graham-Yooll and Co.	Lamp	7,670	Hamburg
28	J. Currie and Co.	Lub.	1,000	,,
Feb.				
1	W. Graham-Yooll and Co	Lamp	4,490	,,
1	G Gibson and Co.	Lub.	2,000	Antwerp
Jan.	BELFAST—			
27	J. C. Pinkerton and Co.	,,	150	Hamburg
	Total for Week		3,795,840	
	FOR THE WEEK ENDED 8TH FEBRUARY, 1909—			
Feb.	LONDON—			
2	Ocean Oil Co.	Lub.	800	Stockholm
2	Page, Son and East	Lub. Oil and Gr.	360	Antwerp
2	Produce Brokers' Co.	Lub.	1,600	,,
2	British Pet. Co.	,,	2,050	,,
3	London and India Docks Co.	,,	1,200	Hamburg
3	A. Brown and Co.	,,	4,560	Philadel.
3	,,	Lamp	640	,,
3	B. Jacob and Sons, Ltd.	Lub.	20,490	,,
3	Mordaunt Bros.	,,	6,700	New York
4	Asiatic Petroleum Co. (Telena)	Benzine	1,392,000	Pulo Samboe
4	Anglo-American Oil Co.	Lub.	24,000	New York
4	Mordaunt Bros.	,,	8,150	Philadel.
4	Thames Tug & Lighterage Co.	,,	4,000	,,
4	A. Brown and Co.	,,	3,840	,,
4	Produce Brokers	,,	5,440	,,
4	,,	,,	9,560	New York
4	Wilkins, Campbell and Co.	Lub. Gr.	80	Antwerp
4	Page, Son and East	,,	120	,,
4	G. Haller and Co.	Lub.	160	,,
5	H. W. Peabody and Co.	,,	10	New York
5	Taylor Bros.	,,	30	,,
5	Mercantile Lighterage Co.	,,	54,000	,,
5	J. Harrison	Lub. Gr.	1,440	Antwerp
5	Worthington and Boler	Lub.	4,400	Philadel.
5	Mordaunt Bros.	,,	2,500	,,
5	A. Brown and Co.	Lamp	4,000	,,
5	E. J. Walkenshaw	Lub.	8,000	,,
5	Anglo-American Oil Co.	,,	59,000	,,
6	,, (Navahoe)	Naph.	2,060,530	,,
6	,, ,,	Benzine	683,220	,,
6	,, (Iroquois)	Lamp	2,054,790	New York
6	,, ,,	Gas	343,950	,,
6	British Pet. Co. (Roumanian)	Lamp	1,762,000	Pt. Arthur
6	M. Record	Lub.	6,000	Trieste
6	W. H. J. Alexander	,,	2,000	,,
8	T. H. Lee	Lub. Oil and Gr.	290	Hamburg
8	H. Finckler and Co.	L.Resid.	144,400	Trieste
8	Page, Son and East	Lub. Oil and Gr.	120	Antwerp
8	R. Park and Co.	Lub.	40	Stockholm
	LIVERPOOL—			
2	Meade-King, Robinson & Co.	,,	4,600	Baltimore
3	Stockdale and Doel	,,	6,220	Boston
3	Schlieman's Oil Works	,,	130	Hamburg
4	Meade-King, Robinson & Co.	,,	10,400	,,
4	,,	Spirit	42,000	Rotterdam
4	Vacuum Oil Co.	Lub.Gr.	600	Genoa
3	Burnaby and Chantrell	,,	1,460	New York
5	D. Currie and Co,	,,	430	Hamburg
5	Pickford's	Lub. Oil and Paste	560	,,
5	Vacuum Oil Co.	Lub.	17,960	New York
5	Stockdale and Doel	,,	7,990	Boston
6	Liverpool Storage Co.	,,	15,200	New York
8	Jas. Light and Sons	,,	2,000	,,
8	C. W. Field and Co.	,,	420	Antwerp
	BRISTOL—			
3	H. Pritchard and Co.	,,	1,250	New York
3	H. R. James and Sons	,,	24,440	,,
3	,,	M.Colza	12,000	,,
4	J. and R. Bush	Lub.	7,200	,,
4	,,	Lamp	20,000	,,
4	W. G. Clarke	Lub.	760	Antwerp
4	Pickford's	,,	240	,,
8	,,	Lub. Oil and Paste	550	Hamburg
Feb.	GRIMSBY—			
2	J. Sutcliffe and Son	Lub.	500	Antwerp
4	,,	,,	530	,,
	GLOUCESTER—			
3	Bristol Steam Nav. Co.	,,	1,200	Hamburg
	HARTLEPOOL—			
2	W. Hartlep'l Steam Nav. Co.	,,	280	,,
	HARWICH—			
2	D. Howard	,,	140	Antwerp
4	,,	,,	120	,,
	HULL—			
3	T. Wilson, Sons and Co.	,,	2,000	Trieste
3	,,	,,	107,440	New York
3	,,	,,	640	Antwerp
4	W. Gilyott and Co.	,,	41,800	New York
4	Wilsons and N.E. Co.	,,	880	Antwerp
6	,,	,,	700	Hamburg
6	T. Wilson, Sons and Co.	,,	80	Genoa
	MANCHESTER—			
2	D. Currie and Co.	,,	240	Hamburg
2	J. T. Fletcher and Co.	,,	40	Antwerp
24/12	Meade-King, Robinson & Co.	,,	16,490	Philadel.
4	Worthington and Boler	,,	2,520	,,
4	Bramwell, Fern and Co.	Lamp	980	,,
4	,,	Lub.	4,460	,,
4	Manchester Liners, Ltd.	,,	1,200	,,
4	Pickford's, Ltd.	,,	120	Hamburg
5	British Pet. Co. (Suram)	Lamp	1,277,000	Pt. Arthur
5	Crew, Levick and Co.	Lub.	16,250	Philadel.
5	,,	M.Colza	4,200	,,
5	Geo. B. Taylor	Lub.	38,000	,,
5	Kimberley Oil Co.	,,	2,600	,,
8	C. H. Morton and Sons	,,	1,680	,,
8	Meade-King, Robinson & Co.	,,	15,440	,,
8	,,	,,	17,680	,,
8	,,	M.Colza	5,200	,,
8	W. Hodgson and Co.	Lub.	3,190	New York
8	Kimberley Oil Co.	,,	800	,,
	SWANSEA—			
3	Burgess and Co.	,,	240	Hamburg
	SOUTHAMPTON—			
4	P. E. Curry	,,	1,800	New York
	ABERDEEN—			
5	R. Connon Reid and Co.	Lamp	2,000	Hamburg
	DUNDEE—			
4	D. Alexander and Sons	,,	240	,,
4	,,	Lub.	2,000	,,
5	A. B. Fleming and Co.	,,	2,040	Riga
	GLASGOW—			
3	Clyde Shipping Co.	Lub. Gr.	120	Antwerp
3	J. and A. Allan	Resid.Gas	2,400	Philadel.
5	,,	Luo.	510	Boston
8	Anchor Line	,,	50,270	New York
	LEITH—			
5	G. Gibson and Co.	,,	320	Antwerp
4	W. Graham-Yooll and Co.	Lamp	7,110	Hamburg
4	J. Currie and Co.	Lub.	2,580	,,
4	W. Thomson and Co.	,,	160	Fiume
8	W. Graham-Yool and Co.	Lamp	12,080	Hamburg
	BELFAST—			
3	J. C. Pinkerton and Co.	Lub.	130	,,
	NEWCASTLE—			
2	Tyne-Tees S.S. Co.	,,	1,000	,,
2	,,	,,	5,760	Antwerp
	PLYMOUTH—			
3	Bristol Steam Nav. Co.	,,	250	,,
	Total for the Week		10,508,290	
	Total for the Fortnight		14,304,130	

BORE HOLES FOR OIL

Contracted for by

JOHN M. THOM,

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Patricroft, MANCHESTER.

CONTRACTOR TO H.M. GOVERNMENT.

The Petroleum Review.

By PAUL DVORKOVITZ.

Vol. XX. *(New Series.)* February 27th, 1909. No. 445

THE PETROLEUM REVIEW:

The ANNUAL SUBSCRIPTION for both English and Foreign readers is 26s., including Postage. Single Copies may be had at the offices at 1s.

The Editor would esteem it a favour if readers, when communicating with the various firms advertising in our pages, would mention the "Review."

Contributions upon items of interest are always welcomed from subscribers, but in each case these should be accompanied with the name and address of the sender, not necessarily for publication.

Editorial Notes.

Our Increasing Petroleum Imports. It is eminently gratifying to find that the continuous increase in the consumption of petroleum products in the United Kingdom, which came out so substantially in last year's totals, bids fair to continue in an even greater ratio during the present twelve months. The imports for the past eight weeks of this year stand far ahead of those for the corresponding period of 1908, and for the past fortnight alone the United Kingdom has imported something like 19,000,000 gallons of petroleum products—quite a record. The year 1909 is as yet not very old, still we have imported no less than 61,000,000 gallons of petroleum, or an increase of over 12,000,000 gallons as compared with the official totals published in the Review about the same time last year. America comes in for the lion's share of the increases, her exports to this country of illuminating oil, gas oil, and benzine being far above the figures for the first eight weeks of 1908. The imports of benzine are considerably more than double what they were at the end of last February, while in regard to the figures of illuminating oil imports, these, too, shew in the total a very healthy state of affairs. We can only hope that the present year will continue as it has begun, and then, indeed, our petroleum trade will shew a record beyond precedent.

A Word about the Roumanian Industry. Some people will argue that statistics are always dull reading, yet we venture to believe that in the various details dealing with the Roumanian petroleum industry during 1908, which are to be found upon other pages of this issue of the Review, our readers will find much to interest and instruct them as to the progress which the Roumanian petroleum industry is making. Taken as a whole, the production of Roumania's crude oil is not materially increasing, for the fresh strikes of oil so frequently reported have been scarcely more than sufficient to make up the deficit created by the diminished yield of the old wells. Some very good results have, however, been obtained in the new fields which are being opened up, and to-day a most hopeful tone pervades the industry, which promises to improve within a few months, when the present activity in boring operations is expected to bear fruit in a substantial increase in production. But even then, the influence of the new production upon the industry will largely depend upon the extent to which the older fields may suffer further falls in production, owing to the reduced amount of drilling done there in proportion to the increased activity in the new fields. In a word, however, it may be said that the industry is in a fairly prosperous state, and the prospects were never more hopeful.

The American Producers up in Arms. Something amounting to consternation at present prevails among the American petroleum producers, who are threatened with a serious menace to their business of oil production if the intentions of the American tariff reformers are carried out, and the present countervailing duties upon petroleum are abolished. Many of the American newspapers are becoming almost frantic in their appeals both for and against, but, viewed in an impartial manner, we believe that, should the duties be removed, nothing but great harm can befall the oil industry of the States. At first sight, it must strike the most casual observer that in the American States, Mexico would immediately find a remarkably large outlet for her almost limitless quantities of crude oil, for a few days' journey would bring the Mexican crude to the Texas refineries, where it would be in direct competition with the products of the Mid-Continental fields, as well as the oil from Texas and Louisiana. This fact is, at all events, we should imagine, quite sufficient to negative any attempt that may be suggested to remove the countervailing duties and thus give Mexican oil that advantage in America which American oil can never hope to get in Mexico.

A Much-Needed Reform in Baku. Those interested in the oil industry in Baku are now greatly agitated over the question of the still undeveloped Government petroliferous lands. A group of the smaller producing firms, which took part in the recent meeting of the Baku Petroleum Association, have addressed a telegram to the Minister of Commerce and Industry, urging upon him the necessity for releasing the Government lands for exploitation on suitable terms. They contend that, without some fresh lands being thrown open for exploitation, many firms owning old and exhausted plots will be unable to continue their existence. A system of leases, which would favour the concentration of these fresh lands in the hands of a few individuals, will inevitably lead to the utter ruin of the majority of the producing firms. The Minister has also been asked for permission to discuss the question at the Conference, in the programme of which it was not originally included. The Minister of Commerce, Mr. Timiriaseff, promptly granted the desired permission, and asked for the result of the discussions to be communicated to him by telegraph. The further development of this question, which is of such vital importance for the Baku industry, cannot but be awaited with the greatest interest by all interested in the petroleum industry. Nothing illustrates the gravity of the present situation better than the figures of the January production, which was only 36,000,000 poods, a quantity quite inadequate to meet the requirements of the markets, which the Baku industry has still to serve.

◆

NIGERIA BITUMEN CORPORATION, LIMITED.

The following cable has been received from Lagos, viz.:—Borehole No. 5: depth 981 feet, increase 76 feet; formation, hard mixed sandrock. Borehole No. 6: depth 712 feet, increase 56 feet. Borehole No. 7: depth 699 feet, increase 63 feet. Borehole No. 8: repairs. Borehole No. 9: depth 151 feet, increase 72 feet. The following is an extract from the report of the Acting Manager, dated Lagos, 30th January, viz.:—Borehole No. 7: there have been very encouraging signs at this well during the week, the shale being forced up from the bottom in the same manner as that at Simogu before we struck oil there. In running into the grey sand at 131.00 metres a slight show of oil was observed on the pumpings.

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THE TIN PLATE MARKET.

Messrs. Norton, Owen & Co., of 4, Bishopsgate Street Within, London, E.C., report under date February 25th, 1909, as follows:—

The depression which prevailed in this market has passed away, and during the past fortnight there has been an active demand for oil sizes and a fair amount of business has been put through. Owing to this revival and to the advance in ingot tin, prices of tin plates are stiffer, and we quote oil sizes to-day:—

IC	$18\frac{3}{4} \times 14$	124 sheets	110 lbs.	$11/10\frac{1}{2}$ per box.
IC	$19\frac{1}{4} \times 14$	120 ,,	110 ,,	$11/10\frac{1}{2}$,,
IC	20×10	225 ,,	156 ,,	$16/10\frac{1}{2}$,,

F.o.b. Wales. Tin lining and iron hooping extra.

◆

PRODUCTION OF ENGLISH COMPANIES IN RUSSIA.

Baku Russian Petroleum Co., Ltd.—The production for the week ended 13th February was 166,400 poods, or 2,682 tons; and for the week ended 20th February was 166,800 poods, or 2,689 tons.

Russian Petroleum and Liquid Fuel Co., Ltd.—The production for the week ended 13th February was 210,000 poods, or 3,386 tons; and for the week ended 20th February was 211,000 poods, or 3,402 tons.

Spies Petroleum Co., Ltd.—The production for the week ended 14th February was 278,780 poods, or 4,496 tons. The production for the corresponding week last year was 215,375 poods, or 3,473 tons. The output for the week ended 21st February was 310,615 poods, or 5,009 tons. The total production for year to 21st February was 1,314,660 poods, or 21,204 tons. The total production for the corresponding period last year was 1,028,090 poods, or 16,582 tons.

The European Petroleum Co., Ltd.—The production for the week ended 14th February was 146,736 poods, or 2,366 tons; and for the week ended 21st February was 147,215 poods, or 2,273 tons.

LONDON OIL SHARE MARKET.

Friday, February 26th, 1909.

Although the American Market has been disorganised and political rumours adverse, business continues to improve in the Oil Share Section of the London Stock Exchange, and although top prices have not been quite maintained, a decided advance has been registered amongst the leading shares.

Shell Transport Ordinary have been very active, and have risen 2s. 3d. per share at 51s. 3d. to 52s. 3d.; Burmah Oil Ordinary record an improvement of $\frac{5}{16}$ at $5\frac{1}{4}$-$5\frac{3}{8}$, Lobitos Oil are 1s. 3d. better at 24s. 9d. to 25s. 9d., Assam Oil 6d. higher at 17s. to 18s., and Spies 3d. at 10s. 6d. to 11s.

Latest quotations of Oil Shares will be found on page 136.

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ROUMANIAN PETROLEUM EXPORTS DURING DECEMBER.

According to official statistics of the Roumanian Customs the following quantities of petroleum products were exported from Roumania to various countries in December:—

Destination	Crude oil, Distillate, Gas oil, etc. Tons.	Refined oil Tons.	Benzine. Tons.	Total. Tons.
England	4,241	7,794	3,097	15,132
Egypt	—	7,200	—	7,200
Belgium	11	3,029	—	3,040
Turkey	87	2,206	24	2,317
Bulgaria	157	117	104	378
Germany	29	—	173	202
Austria-Hungary ..	—	15	35	50
Italy	10	—	—	10
Servia	—	—	1	1
Total	4,535	20,361	3,434	28,330

Of the total of 28,330 tons exported from Roumania in December, 27,841 tons were shipped from Constantza.

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THE INDIAN PETROLEUM MARKET.

(*Crowded out of page* 149.)

Bombay, Jan. 30th.

The petroleum market is strong. The following are the current prices of the Standard Oil Co. of New York:

		Rs.	a.	p
Snowflake Brand, 150 deg., American	(per case)	6	4	2
White Rose, 150 deg. ,,	,,	6	4	2
Chester Brand, 76 deg. Abel	,,	4	12	2
Devoe's Brilliant	,,	4	12	2
Monkey Brand, 76 deg. Abel	,,	4	6	2
Elephant Brand, 125 deg. (bulk in tins)	(per 2 tins)	3	15	0
Elephant Brand, 125 deg. (bulk without tins) (per 8 Imperial gallons)	..	3	5	0

The following are the current prices of the Asiatic Petroleum Co., Ltd.:—

		Rs.	a.	p.
Swan Brand, bulk loose..	(per unit)	2	15	0
Swan Brand, new tins	(per pair)	3	9	0
Ship Brand, bulk loose	(per unit)	3	5	0
Ship Brand, new tins	(per pair)	3	15	0
Rising Sun Brand, bulk loose	,,	3	7	0
Rising Sun Brand, new tins	,,	4	1	0
Anchor Cases	(per case)	4	6	0
Silver Light 150 deg. cases, ...	(per case)	5	4	0

◆

Our Special Shipping Supplement.—We regret that in our special shipping supplement in our last issue we omitted in some of the earlier editions to mention the name of the Caspian Oil Co.'s new tanker "Hyrcania," which was launched a few months ago.

Roumanian Petroleum Production during 1908.

COMPLETE STATISTICS.

The latest issue of the *Moniteur du Petrole Roumain* contains full details of the production of crude oil in the Roumanian oil fields during 1908.

According to these statistics the total production of crude oil in the Roumanian fields for the past twelve months amounted to 1,147,727 tons as against 1,129,097 tons for 1907, which means an increase of 18,630 tons or 1½ per cent.

The progress of the production since 1897, when it for the first time exceeded 100,000 tons, was as under :—

	Quantity (in tons).	Value (in francs).
1897	110,000	4,400,000
1898	180,000	7,200,000
1899	250,000	10,000,000
1900	250,000	10,000,000
1901	270,000	10,800,000
1902	310,000	12,400,000
1903	384,302	17,293,635
1904	500,561	22,525,245
1905	614,870	27,669,155
1906	887,091	33,919,095
1907	1,129,297	50,818,365
1908	1,147,727	51,647,715

The output of each of the producing fields in 1908, as compared with 1907, was as under :—

	1908. Tons.	1907. Tons.	Increase or Decrease.
Prahova District—			
Bustenari-Calinet-Burloi	473,106	487,029	−13,923
Moreni	337,753	292,147	+45,616
Campina-Poiana	233,825	230,134	+ 3,691
Baicoi	21,127	44,315	−23,188
Tintea	20,406	15,415	+ 4,991
Bordeni-Parsani	4,943	4,367	+ 576
Recea	1,298	845	+ 453
Apostolache	854	671	+ 183
Pacureti-Matitza	834	1,145	− 311
Draganeasa	589	463	+ 126
Popesti	279	289	− 10
Opariti-Capaceni	212	325	− 113
Gornetu-Cuib	24	21	+ 3
Chiojdeanca	20	4	+ 16
Poiana de Verbilau	1	2	− 1
Aricesti	—	5	− 5
Total for Prahova	1,095,821	1,077,671	+18,150
Dambovitza District—			
Gura-Ocnitza	21,465	26,009	− 4,540
Colibasi	2,412	3,577	− 1,165
Glodeni-Badislavoia	2,169	2,603	− 434
Resca	187	35	+ 152
Malu Rosu	39	94	− 55
Total for Dambovitza	26,272	32,314	− 6,042
Buzeu District—			
Sarata-Monteoru	8,533	9,480	− 947
Policiori	2,198	443	+ 1,755
Berca	35	—	+ 35
Tega	2	4	− 2
Total for Buzeu	10,768	9,927	+ 841
Bacau District—			
Various Fields	14,866	9,185	+ 5,681
Grand Total	1,147,727	1,129,097	+18,630

An analysis of the above figures shews that the Bustenari field, which now includes Calinet and Burloi, has maintained its position as the premier producing region in Roumania, but at the same time has experienced a decline in output against 1907 by 13,923 tons or 2·8 per cent., while in 1907 the output also shewed a decline against that of 1906. The proportionate contribution of this field toward the total Roumanian crude oil production in 1908 was 41¼ per cent., against 42½ per cent. in 1907 and 58 per cent. in 1906.

The Moreni field, which has now taken the second place after Bustenari, shews a remarkable increase in production, namely 45,616 tons, or 15·6 per cent., and is the only field which has saved the situation for the Roumanian petroleum industry.

Campina, which by the advance of Moreni has now been relegated to the third place, has maintained its production on the same level as in 1907, there being an increase of only 3,691 tons.

Of the other fields, Baicoi has reduced its output by more than half, whilst Tintea has increased its by a third against 1907. Baicoi has so far proved itself very unreliable, and has already been the source of many disappointments. On several occasions it raised great hopes by the productions of huge spouters, which, however, gave out very soon.

The percentage contributed by each field towards the total production was :—

	1908. per cent.	1907. per cent.	1906. per cent.
Bustenari	41¼	42½	58
Campina	20½	20	11½
Moreni	29½	26	20
Other Fields	8¾	11½	10½
Total	100	100	100

The progress of the total production in Roumania month by month in 1908, and the number of wells in exploitation each month, is given below :—

	Production in tons.	Number of producing wells.	
		Borings.	Handwells.
January	100,448	596	643
February	90,308	598	644
March	97,969	600	640
April	93,588	610	639
May	99,792	634	619
June	88,624	628	622
July	98,774	630	623
August	97,765	643	620
September	99,494	638	618
October	96,875	666	610
November	90,529	680	600
December	93,561	681	583

It will be seen from the above that there has again been a continuous decrease in the number of hand-dug wells and a steady increase in borings. With the entry into the Roumanian petroleum industry of large and financially powerful companies, hand-dug wells have ceased to play any important part in the Roumanian oil fields and are gradually being either abandoned or transformed into borings.

The production of the individual firms in the fields during the past year, as compared with that of 1907, was as under :—

Firm.	1908. Tons.	1907. Tons.	Increase or Decrease Tons.
Steaua Romana	330,319	355,654	– 25,355
Regatul Roman	211,910	208,588	+ 3,322
Concordia Co.	167,433	178,505	– 11,072
Romano-American Co. ..	111,447	88,181	+ 23,266
Astra Co.	56,870	34,892	+ 21,978
Trajan Co.	36,031	41,268	– 5,237
International Co.	33,781	42,343	– 8,562
Colombia Co.	26,280	30,718	– 4,438
Aquila Franco-Romana ..	23,697	18,833	+ 4,864
Nafta Co.	19,852	11,140	+ 8,712
Seceleanu Bros.	17,044	18,081	– 1,037
Alpha Co.	11,106	8,716	+ 2,390
Galo-Romana Co. (and Gallia)	10,730	7,357	+ 3,373
Arnheemsche Petroleum Maats.	9,142	11,232	– 2,090
K. Ozinga	4,943	4,367	+ 576
Stefanescu and Co.	4,116	5,527	– 1,411
Jean Ganz	3,718	387	+ 3,331
Italo-Romana Co.	3,554	1,200	+ 2,354
Independent Co.	3,432	1,731	+ 1,701
Stroe, Draghici and Co. ..	3,299	2,470	+ 829
Spiru D. Lalu	3,136	2,481	+ 655
Negulescu Family	3,048	1,962	+ 1,086
Anglo-Roumanian Petroleum Co., Ltd.	3,001	—	+ 3,001
Grigorescu and Stroe	2,683	3,336	– 653
Stanescu and Giuglescu ..	2,668	3,683	– 1,015
Olandeza Romana Co.	2,488	3,013	– 525
Ion Grigorescu	2,412	3,230	– 818
I. Koster	2,319	1,246	+ 1,073
Tosca Co.	2,230	878	– 1,352
Grigorescu and Albulescu ..	1,882	2,063	– 181
Stanislas Mihalik	1,374	2,643	– 1,269
Corona Romana..	1,330	3,264	+ 1,934
Romano-Belgian Co.	1,198	396	+ 802

In the Roumanian petroleum industry we observe the same tendency, as in all growing modern industries, to become concentrated in the hands of a few large firms, which are steadily absorbing the small private producers. The latter, although still fairly numerous, represent an infinitesimally small proportion of the total production.

The percentage contributed by each large firm toward the total production of the Roumanian fields during the last three years can be seen from the following table :—

	1906. Per cent.	1907. Per cent.	1908. Per cent.
Steaua Romana	30·85	31·46	28·78
Regatul Roman	13·75	18·45	18·46
Concordia Co.	21·21	15·80	14·59
Romano-American Co. ..	5·41	7·81	9·70
Astra Co.	4·31	3·09	4·95
Trajan Co.	2·53	3·65	3·14
International Co.	4·74	3·75	2.94
Colombia	3·16	2·72	2·29
Aquila Franco-Romana ..	1·56	1·67	2·06
	87.52	88·20	88·92
Firms prodncing less than 20,000 tons	12·48	11·80	11·08
	100·00	100·00	100·00

The state of development of the Roumanian oil fields at the present time and the progress made during the past year is illustrated in the following table, which gives the number of wells in their various stages at the beginning and end of 1908, in the several producing localities :—

	On 1st January, 1908.						On 31st December, 1908.					
	Borings.			Hand-dug Wells.			Borings.			Hand-dug Wells.		
	Producing.	In drilling.	Abandoned.	Producing.	In sinking.	Abandoned.	Producing.	In drilling.	Abandoned.	Producing.	In sinking.	Abandoned.
Prahova District—												
Bustenari	394	153	100	118	46	241	442	125	141	91	71	199
Campina	73	41	55	11	5	115	82	76	64	10	5	102
Moreni	37	27	22	—	—	—	42	25	13	—	—	—
Other fields in Prahova	27	38	48	33	16	153	34	39	53	36	18	151
Total for Prahova .	531	259	225	162	67	509	600	265	271	137	94	452
Dambovitza District ..	12	8	18	101	16	98	15	11	20	83	19	89
Buzeu ,, ..	—	4	19	63	2	57	7	7	18	59	9	58
Bacau ,, ..	54	25	55	316	26	416	59	18	50	304	27	486
Total	597	296	317	642	111	1,080	681	301	359	583	149	1,085

The number of boreholes possessed by each of the leading firms in the Roumanian oil fields at the end of 1908 was :—

	Producing.	In drilling.	Abandoned.
Steaua Romana—			
Bustenari	115	22	66
Campina	69	54	46
Other fields	52	33	52
Total	236	109	164
Regatul Roman—			
Moreni	17	13	3
Other fields	11	21	17
Total	28	34	20
Concordia Co.	147	46	38
Romano-American Co.—			
Bustenari	18	1	—
Moreni	18	7	9
Other fields	5	10	8
Total	41	18	17
Astra Co.	7	10	10
Trajan Co.	25	20	11
International Co. ..	24	10	12
Colombia Co.	30	12	2
Aquila Franco-Romana	25	7	—

With respect to the amount of drilling work done by the leading producing companies in 1908, it may be mentioned that the Steaua Romana drilled 19,950 metres, of which 10,076 metres were at Campina and 5,306 metres at Bustenari. In the case of the Regatul Roman and Concordia companies no figures as to drilling work are available. The Romano-American Co., however, drilled 12,047 metres, about half of which was done at Tetscani-Comanesti, in the Bacau district.

BORE HOLES FOR OIL
Contracted for by
JOHN M. THOM,
Canal Works,
Patricroft, MANCHESTER.
CONTRACTOR TO H.M. GOVERNMENT.

NEW ENGLISH OIL COMPANIES.

Berca (Roumania) Oil Company, Limited.

Registered February 1st. Capital, £12,100, in £1 shares (100 Deferred). Objects, as indicated by the title. Minimum cash subscription, 10 per cent. of any shares, stocks, debentures or debenture stock offered to the public. The first directors (to number no more than five) are L. Kessler, H. G. Simpson, and L. Bloch. Qualification, 250 shares. Remuneration, £50 each per annum (chairman £75), and 5 per cent. of the profits available for distribution after 10 per cent. has been paid on the ordinary shares divisible.

Peruvian Oil Corporation, Limited.

Registered February 16th with a capital of £100 in 2s. shares. Objects: To acquire, deal with and turn to account any property containing, or supposed to contain, petroleum or other oils, shale, coal, lignite, asphalt, bitumen, or any bituminous or petroliferous substances, etc. Private company. Registered without articles of association. The first directors are Messrs. H. W. P. Clinton and C. Lloyd.

Argentine (Western) Petroleum Syndicate, Limited.

Registered February 17th, by Messrs. Roney and Co., Orient House, 42-5, New Broad Street, E.C. Capital £50,000, in 49,900 ordinary shares of £1 each and 2,000 deferred shares of 1s. each. Objects: To acquire farms, mines, bituminous, oil, petroleum and other lands, properties hereditaments in the Argentine Republic or elsewhere; to adopt an agreement with the Mendoza Oil Syndicate, Limited, and to carry on the business of oil, asphalte and bitumen producers and refiners, farmers, graziers, planters, miners, etc. The first directors (to number not less than two nor more than eight) are Messrs. E. N. Casares, 62, London Wall, E.C.; J. C. Gibson, 207, Salisbury House, E.C.; and T. E. Preston, 6, Queensbury Place, S.W. Remuneration, £100 each per annum (chairman £150) and a share in the profits. Registered office, River Plate House, South Place, E.C.

East Tilbury (Canada) Oilfields, Limited.

Registered with a capital of £200,000, in £1 shares. Objects: To acquire certain lands, properties and premises held, controlled or operated by the Barnard-Argue-Roth-Stearns Oil and Gas Co., Ltd., the Federal Oil Co., Ltd., and the Alexandra Oil and Development Co., Ltd. (all incorporated under the laws of Ontario), referred to in an agreement between the Oil Syndicate of Canada, Ltd., of the one part, and P. F. Stevens (as trustee for this company) of the other part, and to carry on the business of oil refiners, miners, manufacturers of by-products from coal and petroleum, explorers for petroleum, etc. The first directors (to number not less than three nor more than nine) are Sir Charles E. Shaw, Bt., M.P., Tettenhall, Stafford; T. J. White, Hillside, Auckland Road, Upper Norwood, S.E.; R. P. Grier, 7, Royal Bank Place, Glasgow; J. C. McKellar, J.P., 45, West Nile Street, Glasgow; and W. B. Steinner, J.P., Feinton House, Woodside Park, London. Qualification, £500. Remuneration, £200 each per annum (£50 extra for the Chairman) and 5 per cent. of the net profits, after deducting interest in any debentures, and 15 per cent. on the ordinary shares, divisible.

Motor Fuel Proprietary, Limited.

Registered February 17th, by Messrs. Light and Fulton, 1, Laurence Pountney Hill, E.C. Capital, £100,000, in £1 shares. Objects: To acquire and hold all or part of the issued share capital of Motor Fuel, Limited; to adopt an agreement with Dr. Paul Dvorkovitz, on behalf of himself and all the other holders of shares in the said company, and to carry on the business of importers, manufacturers and refiners of and dealers in oils and petroleum spirits, etc. The first directors (to number not less than three nor more than five) are Messrs. J. B. Martin, 36, Victoria Street, S.W.; J. G. Ohlenschlager, Shanghai House, E.C.; W. M. Green, 50, Christchurch Road, Streatham Hill, S.W., and P. Dvorkovitz, 45, St. Mary Axe, E.C. Qualification, £250. Remuneration, 10 per cent. of the surplus profits remaining after 10 per cent. has been paid on the ordinary shares, divisible. Registered office, 14, St. Mary Axe, E C.

The Dominion Oil Company, Limited.

Registered with a capital of £120,000 in £1 shares. The objects of the company are to acquire from the Crown Gas and Oil Co., Ltd., of Ottawa, certain oil-bearing and oil-producing lands, representing 1,500 acres, or thereabouts, in the Tilbury and Romney districts of Western Ontario, Canada, close to Petrolia City.

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JAPANESE OIL MEN IN LONDON.

The Review was honoured this week by a visit at its offices of Mr. Koichi Terada and Mr. K. Kondo, two of the most well known oil men in the Far East. Mr. Terada is the managing director of the Kokuyu Kyodo Hanbaisho, and also of the Nanboku Oil Co., Ltd., as well as a director of the Hoden Oil Co., Ltd., while Mr. Kondo is the superintendent of the Hoden Oil Co.'s refinery at Yokohama. Both gentlemen are at present engaged upon an extended tour of the world's oil fields, and already have visited the whole of the principal oil-producing States in America, inspecting in turn the fields in California, Pennsylvania and Texas. They were much impressed with the potentialities of the American petroleum industry.

Messrs. Terada and Kondo leave London this week-end for Russia, after which they will visit the Baku fields, and thence probably proceed to the oil-producing territories of Roumania and Galicia, and will probably reach Japan in the course of three months' time.

— *CONNECTION WANTED* —
IN
PETROLEUM MOTOR OILS.
HANS TH: ARNEMANN, Christiania, Norway.

THE PETROLEUM TRADE OF BATOUM.

DETAILS FOR DECEMBER.

The month of December in the volume of trade done at Batoum surpassed all previous months during 1908. This is to be explained by the desire of all exporters to complete as far as possible deliveries under contracts concluded for that year. These increased deliveries have brought the total shipments up to 4,740,000 poods, the largest part of which consisted of kerosene in bulk and in cases. The exports of kerosene in bulk amounted to 2,743,000 poods, and of kerosene in cases 793,000 poods. This turnover in case oil has exceeded all expectations, as for this product there were no running contracts to complete and practically all the shipments were spot sales, effected at firm prices of 1·85-1·87 roubles per case. The trade in other products did not keep pace with the kerosene trade, there being no special demand for such products.

The following are the figures of the arrivals of oils from Baku and shipments from Batoum in December, and also the stocks on December 31st:—

	Arrivals. Poods.	Shipments. Poods.	Stocks on Dec. 31st. Poods.
Refined Kerosene ..	4,080,000	3,536,000	3,303,000
Kerosene Distillate ..	283,000	331,000	181,000
Solar Oil	80,000	—	97,000
Machine Oil	853,000	561,000	1,052,000
Spindle Oil	122,000	102,000	58,000
Cylinder Oil	14,000	20,000	6,000
Vaseline Oil	—	103,000	23,000
Lubricating Oil Distillate	—	—	8,000
Residuals, etc.	540,000	87,000	714,000
Total ..	5,900,000	4,740,000	5,442,000

The uninterrupted arrival of goods during the month has naturally raised the stocks of oils at the depôts, and in the case of machine oil in particular the increase amounted to 30 per cent. The exports in December exceeded those for November by 900,000 poods, and this falling chiefly on kerosene shipments, prevented the stock of that product from being excessively increased. A substantial portion of the shipment of kerosene in December went to Russian ports, the quantity being 565,000 poods. One cargo of 319,000 poods was shipped to the Far East. To ports in the United Kingdom a comparatively small quantity of oil was shipped; German ports took 692,000 poods, French ports 566,000 poods and Italian 267,000 poods. Shipments to Belgium were only 260,000 poods, which were below the normal quantity. Small quantities of kerosene in bulk were shipped to Malta and Tunis. To Alexandria there were shipped 328,000 poods.

The case oil shipments were distributed among the Turkish and Balkan markets to an aggregate of 782,000 poods, while small quantities aggregating 16,000 poods were shipped to the Far East.

RAILWAY TANK WAGONS
Of every type for Cash, Purchased, Lease or Hire.
ROLLING STOCK OF EVERY CONCEIVABLE KIND.
STEEL STORAGE TANKS, ETC.
W. R. RENSHAW & CO., Ltd.,
PHOENIX WORKS, STOKE-ON-TRENT.
P.A.B.

THE GROSNY OIL FIELDS DURING NOVEMBER.

The production of crude oil at the Grosny oil fields in November amounted to 4,131,801 poods, which included 753,870 poods produced by spouters.

The production of the various firms during the month was as under:—

	Poods.
Akhverdoff Co.	1,799,500
Spies Petroleum Co., Ltd.	815,565
Executors of Maximoff..	548,000
Kasbeck Syndicate, Ltd.	308,960
Anglo-Russian Maximoff Co., Ltd.	284,500
North Caucasian Oilfields, Ltd.	127,960
Russian Standard	102,335
Tcheleken-Daghestan Co.	76,290
Moscow Naphtha Co.	41,340
Caspian and Black Sea Society	20,485
St. Petersburg Co.	18,600
MacGarvey	18,266
Kholodovsky	1,000

The production by spouters was obtained by the following firms:—

	Poods.
Akhverdoff Co.	338,000
Spies Petroleum Co.	181,770
Executors of Maximoff	120,000
Kasbeck Syndicate, Ltd.	106,200
North Caucasian Oilfields, Ltd.	7,900

The total production of crude oil at Grosny in the first eleven months of 1908 thus amounts to 48,310,833 poods, of which 13,754,375 poods were obtained from spouters. This production is the highest on record for the Grosny oil fields; the number of productive plots is 41; the average depth of the productive wells 1,340 feet, The stock of crude oil at the wells on the 1st of December (o.s.) was 2,002,706 poods, the quantity of oil used as fuel at the wells during November was 679,829 poods. The amount of drilling work done in November was 4,577 feet, on 27 plots, in 46 boreholes.

On the 1st of December there were at Grosny 286 boreholes; 154 in exploitation, 45 in drilling, 10 in trial baling, 6 undergoing repairs, 9 derricks in construction, and 62 inactive wells. There are 13 firms operating in the Grosny oil fields, covering an area of 1,315.7 acres.

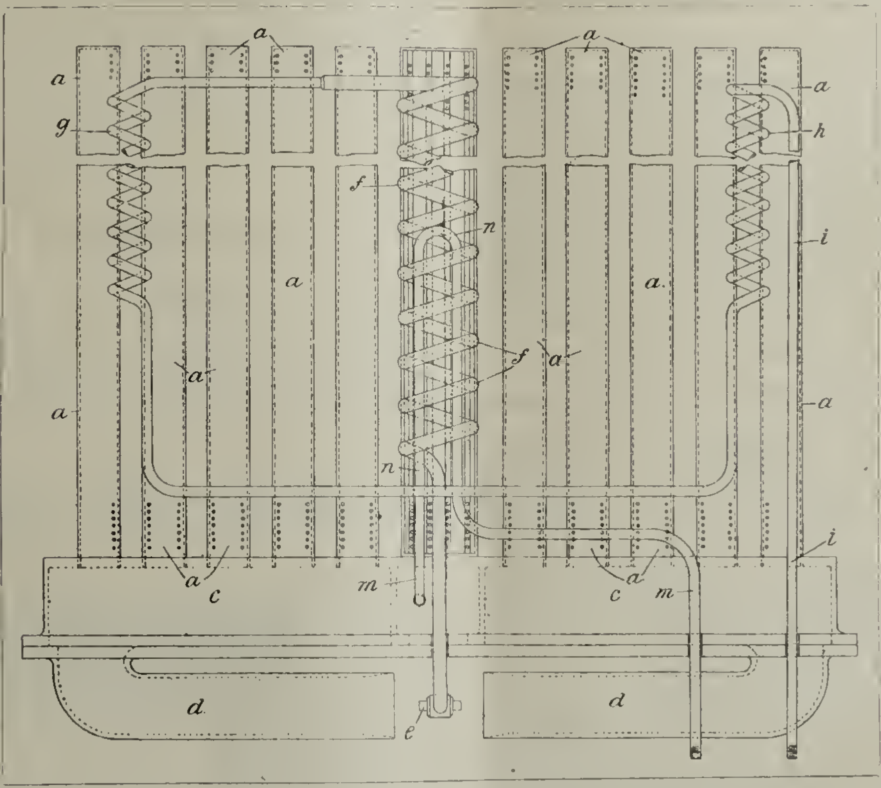
ANOTHER SPOUTER AT SURAKHANY.

On January 5th a spouter commenced to flow on the property of the Baku Naphtha Co. at Surakhany from a depth of 1,561 feet, the borehole having a diameter of 14 inches. The same well for the first time spouted on the 2nd of November, yielding a semi-black crude oil, but after eight hours it ceased flowing owing to the borehole becoming corked up. Now the well has resumed spouting, and for three days it was throwing up a mass of clayish mud with natural gas, and a small admixture of oil. During that time, for about two hours daily, it was throwing up a pure crude oil of a specific gravity of 0·820 at the rate of about 10,000 roods per hour. Gas is issuing from the borehole continuously, and the firm are now devising means of utilising this.

TEMPORARY ADDRESS.
J. C. GOODALL,
24, Forest Road,
Kew Gardens, S.W.
Late Manager, London Branch, Homelight Oil Co., Ltd.
P.O. Tel. 1272 Richmond.

AN IMPROVEMENT IN MINERAL OIL BURNERS.

An English patent has been granted to Messrs. Fawcett Preston and Co., Ltd., of Liverpool, and Mr. Henry Dinsdale, engineer, of 17, York Street, Liverpool, for an invention which has reference to mineral oil and like burner, and particularly those employed for generating a large quantity of heat, such as for heating steam generators for use on self-propelled vehicles or vessels, or for other purposes to which they are applicable. The patent relates more particularly to that class of burner wherein the liquid fuel employed is a mineral oil, such as paraffin or analogous oil, and wherein such oils are converted to gas or vapour before being ignited and burned. At the same time, it is to be stated, that the apparatus hereinafter described is not restricted in its use to those oils, as it is also serviceable in cases where spirit, such as petrol, is employed as the heating fuel. However, for convenience, it is assumed in the following description that the liquid fuel used is mineral oil, to the use of which it is especially directed.



The particular type of burner to which this invention refers, is that wherein separate supply and vapourising coils are provided for the pilot and main burners respectively. In the known kinds of burners of this type, air is admitted at the sides of the pilot burners in variable proportions according to the medium which partly encloses the pilot burner. The primary object of this invention is to provide an improved burner of the above character suitable for mineral oils, and such object is attained by enclosing the pilot burner by imperforate walls so as to prevent access of air thereto at the sides.

The following is a description of a burner, in which the invention hereunder is involved.

The heating gases burn at nozzles or apertures distributed over or in a plurality of tubes which communicate with the main gaseous mixing and supply tubes, and are fed with the mixture from same; and at a suitable point or part of the burner in relation to these main heating burner tubes—say at the centre—there is a pilot burner, separately supplied with oil vapour and air, the oil being supplied to this burner through a coil or pipe disposed above it, which converts it into a gas or vapour, such vapour being introduced through a nozzle into the mixing tube of the pilot burner.

This mixing or combining tube of the pilot burner discharges into an outer tube or casing, in which the combustible mixture is distributed along the length of the tube, through a plurality of nozzles or holes—preferably a plurality of rows of same—at the upper part, such holes having between them recesses, into which solid matters can fall and collect, and whence they can be readily removed.

Above these holes at which the combustible fluid burns, there is an enclosed space, constituting a species of closed combustion chamber, upon the top of which the main oil heating and vapourising or gasifying coils or pipes are placed, they being heated by the heat in this combustion chamber, and passing away over them.

The oil, prior to being passed over the coil above the pilot burner coil, may be passed through another coil disposed over another part of the burner.

To each end of the mixing chamber is attached an induction tube *d* which approach each other and terminate in proximity to the nipples *e* fitted to the end of the vapourising coil *f*. This coil is shewn as being disposed in the centre of the burner and connected to a coil *g* at one side thereof, while this latter coil is connected to a coil *h* mounted on the opposite side of the burner, and connected with a liquid fuel supply pipe *i*.

The burner tubes *a* are shewn as being fitted to one wall of the mixing chamber *c*, while the induction tubes *d* are attached to a wall oppositely disposed and connected thereto by bolts or other means. The main mixing chamber is also preferably divided at a part of its length as hereinafter referred to. The pilot burner comprises a box *j* which serves as a mixing chamber therefor, and has an upper surface provided with nozzles or orifices *k* and channels *l*, the latter being provided for the purpose of preventing solid matter such as carbon, congealed oily substances, dust, etc, choking the said nozzles. This box or mixing chamber is disposed below the main vapourising coil *f* and is fitted with walls or plates *w*, which extend the length of the box and project upwardly to the coil *f*—which partly projects down into the space within these walls or plates. Thus the space between the burner nozzle or orifice surface of the box *j* and the coil, is enclosed. The box *j* is attached to the main mixing chamber *c* at or about that part in which the same is provided with a dividing wall or chamber, and where a chamber forms the division, this serves for the passage of the pipe *m*, connecting the pilot vapourising pipe or coil *n* with the pilot supply *o*. The pipe *m* forms a part of the pilot vapourising coil *n*, which is preferably U-shaped, and extends within the main vapourising coil for a portion of its length, being connected at its opposite end to the liquid fuel supply. The vapourised oil from the pilot nipple *o* enters the pilot induction pipe *q*, and introduces air in therewith, which passes to the mixing chamber or box of the pilot burner.

The compound main and pilot burner for liquid fuel, especially for mineral oils, has been found to give highly successful or improved results over liquid fuel burners now in use for generating steam (especially under conditions such as exist in connection with generating steam for self-propelled vehicles); while the arrangement of the pilot burner with upper enclosing walls or sides below the main central vapourising coil, serves to increase the efficiency and action of the burner, and renders it very serviceable for burners of this character where mineral oils are employed.

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THE UNION OIL COMPANY OF CALIFORNIA.

ANNUAL REPORT.

The annual meeting of the stockholders of the Union Oil Co. of California was held at Oleum, Cal., on January 21st.

The annual statement of the directors of the company shewed that in earning capacity, in amount of territory owned, in production of crude, and in its equipment for marketing its products, no other concern on the coast, not excepting the Standard, can compare with it. For the year 1908 the net earnings were $3,022,932. In 1902, the first year dividends were declared, the amount was $299,084. The total net earnings since that time are $8,287,851. The dividends during that period were $4,544,759, not including a special dividend paid last August. The total amount received during the year just closed for oil sales was $8,167,840. This included refined products, asphalt and crude.

The company's total land holdings are 234,315 acres. Of this amount, 164,049 acres are owned in fee and 59,577 acres are leased, and 10,688 acres are held under mineral claims. This tremendous acreage is located in eleven different counties of the State, extending from Humboldt county, in the north, where it owns 3,168 acres, to San Bernardino county, south, where its holdings amount to 6,400 acres. Most of the land owned and controlled by the company is in proven districts and is being drilled. The company is now operating 40 strings of tools, 23 of them in the Santa Maria district and the balance in the Los Angeles, Fullerton and Sunset fields. At least six strings will be put on in Sunset as soon as the material can be procured. As shewing how difficult a matter increasing production is in California, it may be said that the company only completed 43 wells during the year just closed. Of these 15 were drillings at the beginning of 1908.

With this immense opportunity for supplying its own oil, the company has found it necessary to buy hundreds of thousands of barrels. The 236 producing wells on the company's list supply about one-half the oil required for its trade, and the two refining plants at Kern River and Oleum, on San Francisco Bay, have no trouble in taking care of the refining product.

The transportation business of the company has increased 40 per cent. during 1908 as compared with the figures for 1907. The fleet of oil-carrying vessels has also augmented by the addition of two large vessels brought around the Horn, and this fleet of ten ships is kept busy in the trade with Spanish America, the Hawaiian Islands and Japan, shipments to Oregon and Washington points being made in other vessels than its own. The company does an immense business in crude oil with Panama, Guatemala, Chille and the Hawaiian Islands, where it is used for fuel.

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BAKU PRODUCTION DURING JANUARY.

The total production of crude oil at the Baku oil fields during the month of January (o.s.) amounted to 36,149,453 poods, to which the Bebe-Aibat field contributed 8,662,969 poods. There were no spouters in January.

The production of the leading firms operating in the Baku oil fields in January was as under :—

	Poods.
Nobel Bros.	5,300,000
Caspian and Black Sea Society	2,800,000
Caspian Society	2,100,000
Mantascheff and Co.	2,100,000
Mirzoeff Bros.	1,300,000
Moscow-Caucasian Co.	1,000,000
Pitoeff and Co.	1,000,000
Russian Naphtha Co.	900,000
Russian Petroleum and Liquid Fuel Co., Ltd.	900,000
Nagieff	800,000
Bibi-Eybat Petroleum Co., Ltd.	800,000
Neft Co.	700,000
Baku Russian Petroleum Co., Ltd.	600,000
European Petroleum Co., Ltd.	600,000
Naftalan Co.	600,000
Schibaieff Petroleum Co., Ltd.	600,000
Baku Naphtha Co.	600,000
Kavkaz Co.	600,000
Melikoff and Co.	500,000
Assadulaeff	500,000

CLASSIFIED IMPORTS INTO UNITED KINGDOM UP TO FEBRUARY 22nd, 1909.

IN GALLONS.

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Country.	Illuminating.		Lubricating.		Residuals.		Gas Oil. (Solar)		Benzine.		Fuel Oil.		Other Descriptions.		Totals.	
	Since Feb. 8.	From Jan. 1.	Since Feb. 8.	From Jan. 1.	Since Feb 8.	From Jan. 1.	Since Feb. 8.	From Jan. 1.	Since Feb. 8.	From Jan. 1.	Since Feb. 8.	From Jan. 1.	Since Feb. 8.	From Jan. 1.	Since Feb. 8.	From Jan. 1.
Austria ...	—	—	2,050	20,410	8,100	120,810	—	—	—	—	—	—	—	—	10,150	141,220
Belgium ...	—	70	34,060	104,660	—	—	—	—	—	—	—	—	—	—	34,060	104,730
Canada ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dutch India.	—	400	—	—	—	—	—	—	1,725,800	5,695,100	—	80	—	80	1,725,800	5,695,660
Germany ...	27,850	159,060	52,200	153,690	—	—	—	—	—	—	—	—	—	4,640	80,050	317,390
Holland ...	—	300	320	960	—	—	—	—	240,060	286,210	—	—	—	7,480	240,380	294,950
Roumania ...	1,574,700	1,714,450	—	—	—	—	919,000	2,191,800	—	938,360	—	—	—	—	2,493,700	4,844,610
Russia ...	792,200	3,734,560	78,660	404,930	—	—	—	—	—	886,540	—	—	—	59,530	870,860	5,026,030
U.S.A. ...	5,521,440	20,469,880	1,443,590	6,871,480	—	12,720	4,777,530	11,885,100	755,580	3,499,330	1,009,280	1,009,280	36,780	1,037,750	13,544,200	44,845,070
Other Countries	—	—	100	7,470	—	—	—	—	—	—	—	—	—	1,000	100	8,470
	7,916,190	26,078,720	1,610,980	7,563,600	8,100	133,530	5,696,530	14,076,900	2,721,440	11,305,540	1,009,280	1,009,360	36,780	1,110,480	18,999,300	61,278,130

THE PRODUCTION OF PETROLEUM IN AMERICA DURING 1908.

A Preliminary Estimate by Dr. David T. Day.

The production of petroleum in the United States in 1908, according to a preliminary estimate made by David T. Day, of the United States Geological Survey, amounted to between 175,000,000 and 180,000,000 barrels, an increase of between 5 and 9 per cent. as compared with the production of 166,000,000 barrels in 1907. It will thus be seen that Dr. Day's figures exactly agree with those published in the last issue of the Review. The total value of the product during 1908 shewed an even greater proportionate gain, for the price of oil increased in California, and remained steady in other fields except the Gulf. The increases are attributed to steady growth in Illinois and California, though neither field shewed phenomenal development.

The greatest gain in number of barrels and in percentage of production was in Illinois. During the last half of 1907, the rate of oil production in this State was more than twice as great as in the first half, and this increase continued throughout 1908, so that the record for the year shews a gain of more than 8,000,000 barrels beyond the output of 1907, or fully 33 per cent.

In California the progress of the industry was marked by increased production, consumption, prices, and shipments; decreased stocks; and extension of fields. The value of the oil production in California in 1907 exceeded that of any other mineral product, and the State was second in rank among oil-producing States. From the best information available at the present time, it is believed that the production of crude petroleum in California, in 1908, will aggregate between 44,000,000 and 46,000,000 barrels, exceeding that of 1907 by about 12 per cent. Nearly every district shared in the increase.

Production is said to have declined generally in the Appalachian and Lima-Indiana fields, but the Mid-Continent field held its own. In Colorado the production of the Florence and Boulder fields continued steadily during 1908, and much interest was aroused in the new Rangely field, in the north-western part of the State.

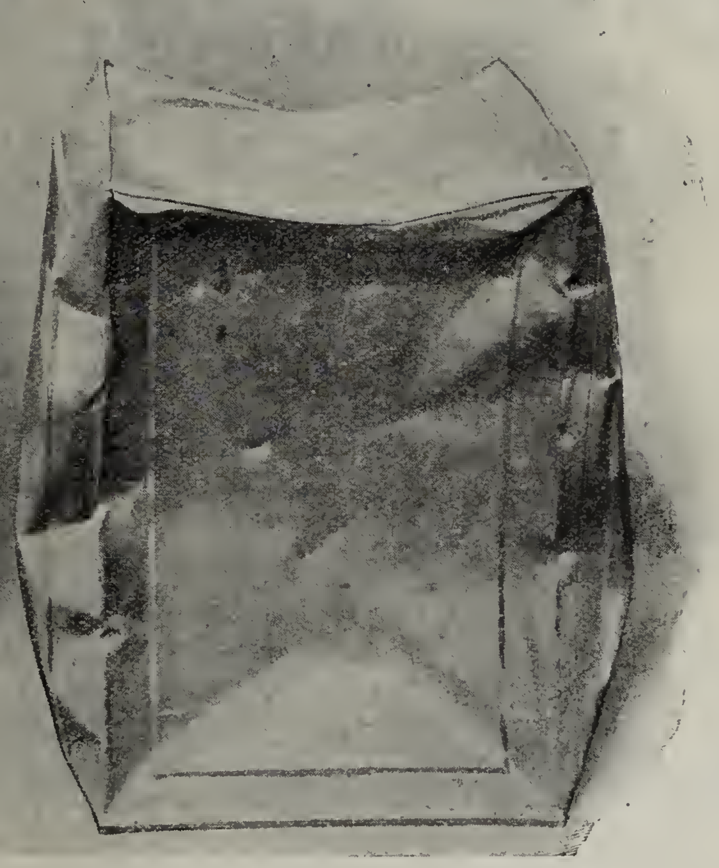
In Kansas and Oklahoma unusual activity was evident in the erection of small refining plants, many of them for the purpose of taking off light proucts from petroleum and selling the residuum for fuel oil or for use on roads.

The decline in production in Texas, begun in 1907, continued in 1908, in spite of new finds south of the developed fields.

In Louisiana the chief event of the year was the withdrawal from entry of 6,500 acres of public land in the neighbourhood of the Caddo field, pending a careful geologic examination by the United States Geological Survey, with a view to preventing a waste of natural gas that has been estimated at 75,000,000 cubic feet a day, or more than one-twentieth of the amount consumed in the entire United States. An investigation of the oil field in co-operation with the Geological Survey of Louisiana is now in progress, and additional information concerning it will be available this spring. Production in southern Louisiana was steadily maintained.

CAN-MAKING PLANT.

American "Hemmed-edge" Can, showing how easily the end can be forced off.

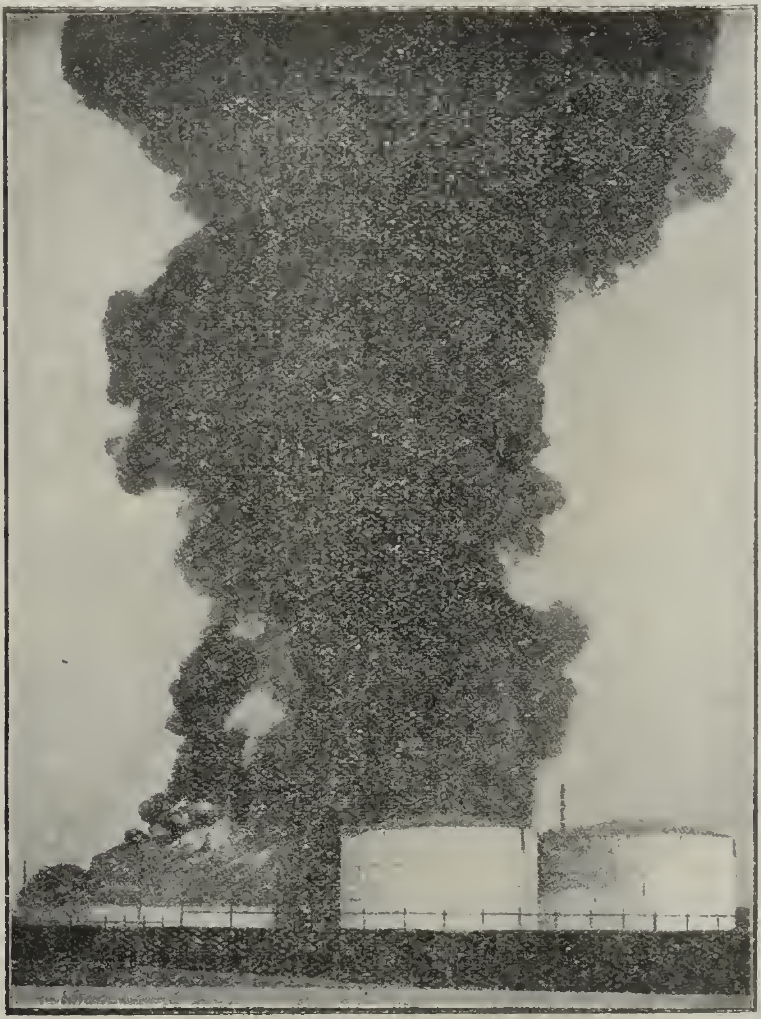


"Rhodes" "Double-seamed" Can, after being heavily hammered the ends are just as firmly attached.

DOUBLE SEAMED CANS, as made by "Rhodes" Patent Machinery, are produced at **same or less cost** in every respect as the "Hemmed-edge" Can.

Sole Makers— **J. RHODES & SONS, Ltd.,** Grove Iron Works, WAKEFIELD, ENG

GREAT BENZINE FIRE IN GERMANY.



As a result of a great fire which recenly broke out at the works of the Benzine Storage Co., at Blexen, Germany, some days ago, a large portion of the storage installation was destroyed. The discharge of the sea-going tank barge "Zeelandia," containing some 1,500 tons of benzine, was proceeding, when an explosion occurred in the tank into which the benzine was being pumped. The force of the explosion lifted off the roof and the tank was instantaneously enveloped in flames, while in a few seconds the neighbouring tank No. 8 also caught fire. The installation altogether consisted of nine large tanks and one small settling tank—five of these being a few years old, the remaining four being practically new. The five older tanks with the settling tanks form a separate group from the four new tanks, each group being surrounded by a ditch and earthen wall. On the day of the fire the old tanks contained about 8,000 tons of benzine, whilst the new tanks contained about 9,500 tons. The distance between the tanks in the new group which was burnt down was only three or four yards, whilst the distance between the new and old group of tanks, which latter remained untouched, was barely a dozen yards.

At the time of the explosion the foreman of the works was ascending the ladder of the tank, but beyond having his hair singed he escaped serious injury, and had time to descend the ladder and get out of the enclosure. The fire, which commenced on a Monday, lasted up to the Friday morning. The conflagration, of which we reproduce a photograph, published in *Petroleum*, demonstrated the comparative harmlessness of such fires, if only certain simple precautions are taken in the construction of the installation. Very little of the spirit escaped from the tanks, and the bottom of the surrounding ditch was scarcely covered. With the exception of the first tank, which exploded, the other tanks burned out quietly.

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Hydrolene and all kinds of Petroleum Pitch.

RUSSIAN NOTES.

Is it a New Field?—Reports have been received at Grosny of the striking of an oil stratum in a borehole which is being drilled near Siernovodsk station, on the Vladicaucasian Railway.

The Central-Tcheleken Petroleum Company, which has now been in existence for three years without having commenced its business properly, had in 1907 incurred an expenditure of 78,421 roubles. The company has creditors for 22,500 roubles. The nominal capital is 1,000,000 roubles.

An Early Opening of Navigation Predicted.—Reports from the Volga predict an early opening of navigation this year, and the sailing tank fleet at Baku is already busily preparing for operations. The vessels are loading up with residuals and are taking up their proper berths in the roadstead.

Forward Sales of Grosny Oil.—The majority of the crude oil producers at Grosny have sold their output foi a considerable period in advance, at prices 2 or 3 copecs above those ruling at Baku. The principal buyers are two local firms. The prices of benzine both crude, and refined, are rather low.

English Capital for Sakhalin.—According to a report from St. Petersburg, there are present representatives of an English company desirous of obtaining a concession for the exploitation of petroleum on the Russian part of Sakhalin. The Government is said to be willing to grant such concession on the condition that the company shall be joined by Russian capitalists.

The Tchimion Company, which is the only firm operating on an industrial scale in the Ferghana oil field during 1908, despatched from Vannovskaia station 1,000,700 poods of residuals, 45,000 poods of kerosene, 21,000 poods of benzine, and 300 poods of other production. The amount paid by the company during the year as excise duty was 150,000 roubles.

More Pipe Line Leakages.—Leakages in the Baku-Batoum pipe line continue to cause great anxiety to those responsible for its proper working. Not long ago, at a spot where the pipe became rusted through, a hole was formed and an artificial spouter struck up, which continued to act for eight hours. Several hundreds of tons of kerosene were lost in this way.

Oil and Gas at Surakhany.—The output of the Surakhany field in November amounted to 27,237 poods of white crude oil, 191,188 poods of black crude oil and natural gas, equivalent to 362,870 poods of crude oil. Of the white, 17,334 poods belongs to Assadulaeff, 5,183 poods to Benkendorff, and 4,720 poods to Nobel Bros.; the black crude belongs all to the Baku Naphtha Co., whilst the bulk of the natural gas was produced by Mirzoeff Bros.

The Uchta Oil Field.—A Moscow paper is responsible for the statement that upon Mr. Stolypin's initiative, the Government will in the course of the year carry out fresh researches in the Uchta oil region, including the sinking of three deep borings. The Provincial Zemstvo of Vologda has decided to build a road to the Uchta oil field from the village of Polovnikoff, a distance of 177 versts.

ROUMANIAN NOTES.

Prolific Moreni.—Consequent upon the good results obtained from its well No. 26 at Moreni, the Regatul Roman Co. is now drilling several new wells in the immediate vicinity, two of which have already reached the oil stratum and promise a good yield.

Consumption of Duty Free Denatured Benzine.—The consumption in Roumania of denatured benzine for motor purposes in 1908 amounted to 8,192 tons, as against 5,016 tons consumed in 1907, which is an increase of more than 60 per cent.

Work Suspended.—As a result of the geological report made made by Professor Mrazec, in connection with the borehole which the Aquila Franco-Romana was drilling at Pleasa in the Moreni district, work on this well has been suspended at a depth of 472 metres.

Latest from Burloi.—Mr. Van de Werk's well No. 9 at Burloi is producing, with the aid of a Canadian pump, some 40 tons of oil daily. The Concordia Co.'s well No. 183 has struck oil and is yielding 15 tons daily. The Steaua Romana has two wells in drilling in this locality.

Activity at Bordeni.—The International Co.'s well at Bordeni has not yet been placed in exploitation owing to the present inadequate water supply, which prevents regular working. The Concordia and Romano-American Companies are both drilling actively in this locality.

The Aurora Company.—Negotiations have now re-commenced on the lately much discussed subject of the reorganisation of the Aurora Co., with a good prospect of success. It is even stated that the main questions of principle have already been agreed, and there are only left matters of detail to be adjusted.

The Steaua Romana has struck oil in its well No. 117, at Bucea in the Campina district, at 320 metres. During the first few days the well spouted throwing up between 250 and 450 tons of oil per 24 hours, and later on fell off to 150 tons. No. 169 has also struck oil and is being baled. At Gahitza, in the same district, well No. 122 has also been spouting and yielding 100 to 120 tons daily.

Liquid Fuel Combine.—The agreement between the Roumanian refiners regarding the sale of residuals expires on the 30th of April next. The first steps have already been taken with a view to its renewal, and although there are still certain difficulties to overcome, there can be no doubt that this agreement will be renewed, it being in the interests of all the refiners to regulate the consumption and keep up the price of liquid fuel.

A Satisfactory Settlement.—An amicable settlement has been arrived at between Mr. A. Raky and the Regatul Roman Co., respecting the case between them. Mr. Raky claimed a sum of 1,000,000 francs, whilst the company counter claimed for 400,000 francs. The settlement provides for the payment by the company to Mr. Raky of 400,000 francs, and acknowledges his right of ownership on certain petroleum concessions. On the other hand, Mr. Raky will hand over to the company the concessions at Provitza, Bordeni, and Baicoi.

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LATEST QUOTATIONS OF PETROLEUM SHARES.

ENGLISH COMPANIES.

This list is restricted to companies who have paid dividends or who are producers.

Company.	Capital Paid Up.	Value of Shares.	Latest Prices
Assam Oil	£205,000	£1	17/6-18/6
Baku Russian Petroleum ..	£750,000 Ord.	£1	$1\frac{1}{3}$-$4\frac{1}{2}$
,, ,, ..	£650,000 $5\frac{1}{2}$% Pref.	£1	0/3-0/9
Bibi-Eybat Petroleum Co. ..			5/6-6/6
Californian Oilfields	£385,000 Ord.	£1	$5\frac{1}{4}$-$5\frac{1}{2}$
Commonwealth Oil Co. Pref	fully paid (Prem.)		$\frac{1}{2}$-$\frac{5}{8}$
,, ,, Def..	£1 fully paid		$\frac{1}{2}$-$\frac{5}{8}$
European Petroleum.. ..	£550,000 Pref.	£1	1/0-2/0
,, ,, ...	£550,000 Ord.	£1	0/3-0/9
,, ,, ...	£376,000 Deb.	£100	66-70
Russian Pet. & Liquid Fuel ..	£500,000 $6\frac{1}{2}$% Pref.	£1	2/6-3/6
,, ,, ...	£600,000 Ord.	£1	2/0-3/6
Schibaieff Petroleum ..	£575,000 6% Pref.	£5	$\frac{3}{16}$-$\frac{5}{16}$
,, ,, ...	£575,000 Or l.	£1	0/6-1/0
Shell Transport & Trading ..	£2,000,000	£1	51/0-52/0
,, ,, ,, ..	£1,000,000 Pref.	£10	$10\frac{13}{16}$-$\frac{15}{16}$
Spies Petroleum Company ..	£387,500	10s.	10/6 11/0

RUSSIAN COMPANIES.

Company.	Nom. Value in Roubles.	Quotations on Feb. 22nd Lowest Roubles.	Quotations on Feb. 22nd Highest Roubles.
Baku Naphtha Co.	100	317	319
,, ,, ,, (issue of 1908) fully pd.	100	281	—
Balakhany Naphtha Co.	250	—	—
Caspian Society	1,000	3,775	3,825
Mazout Co.	250	—	—
Melikoff, A. C.	250	—	—
Mirzoeff Bros.	250	—	—
Naftalan Co.	250	—	—
Naphtha Co. "Kavkas"	250	—	—
Naphtha Trading Co., A. I. Mantacheff & Co.	250	125	126
Neft Co.	250	—	—
Nobel Bros.	5,000	10,375	10,425
,, ,, ...	250	$522\frac{1}{2}$	—
Rops and Co. V...	250	—	—
Russian Naphtha Co.	250	—	—
Society Mazout	250	—	—
Ter-Akopoff Co.	250	—	—
Tumaieff & Co., J. G.	250	—	—
Volga-Caspian Naphtha and Trading Co	250	—	—
,, ,, ,, (Second Issue)	250	—	—

SCOTCH COMPANIES

Supplied by Messrs. Maclean and Henderson, Stirling.

Company.	Capital Paid Up.	Value of Share.	Latest Prices.
Broxburn Oil Co., Ltd., Ord. 17/- pd	£235,000	£1	£2 4s. 9d.
Do. 6% Cum. Pref. ..	£100,000	£10	£12 8s. 9d.
Burmah Oil, Ord.	£1,100,000	£1	£5 5s. 6d.
Do. Pref.	£250,000	£1	£1 8s. 3d.
Dalmeny Oil Co., Ord. (7 paid) ..	£37,800	£8 10s	£5 0s. 0d.
Do. 5% Pref. ..	£18,900	£7	£4 12s. 0d.
Lobitos Oilfields, Ltd. (£1).. ..	£275,000	£1	£1 5s. 0d.
Oakbank Oil Co., Ltd., Ord.	£170,000	£1	£1 19s. 0d.
Do. Pref. (fully paid)	£36,980	£1	£1 4s. 9d.
Do. Do. (10s. paid)	£63,020	£1	£0 18s. 0d.
Pacific Oilfields, Ltd. (£1)	£200,000	£1	£1 3s. 3d.
Pumpherston Min. Oil Co., Ld., Ord. (17s. paid)	£110,500	17s.	£12 0s. 0d.
Do. 6% Cum. Pref.	£100,000	£10	£14 0s. 0d.
Tarbrax Oil Co., Ltd. Ord. (£1 pd.)	£38,350	£1	£2 19s. 3d.
Do. 6% Cum. Pref.	£35,000	£1	£1 5s. 0d.
Young's Paraffin Co., Ltd., Ord. ..	£452,808	£4	£3 15s. 0d.
Do. "B" Deb...	£150,000	£100	£176 0s.

DUTCH COMPANIES.

Company.	Latest Quotations (per cent.)	Florins
Arnhemsche Petroleum Mij.	34	1,000
Aurora ,, ,, (Deb.5%)	—	—
Campina Poiana Mij.	—	—
Dordtsche Petroleum Mij. (Ord.)	$156\frac{3}{4}$	—
,, ,, ,, (Pref.)	$165\frac{1}{2}$	50
,, ,, ,, (Deb.$4\frac{1}{2}$%)	$102\frac{1}{4}$	1,000
Gaboes ,, ,, ...	—	—
Holl. Rumeensche Petroleum Mij.	70	1,000
Int. Rum. Pet. Mij.	$20\frac{1}{2}$	500
Java Petroleum Mij. (Ord.)	13	1,000
,, ,, ,, (Pref.)	$38\frac{1}{2}$	—
Koninklyke Nederl. Pet. Mij. Shares	$371\frac{3}{4}$	100
,, ,, Share certificates	$370\frac{3}{8}$	1,000
Mœara Enim Petroleum Mij.	$163\frac{3}{4}$	100
,, ,, 1-1,000 Oblig. 5	—	250-1,000
"Moesi Ilir" Petroleum Mij.	—	—
Nederl.-Rumeensche Petroleum Mij.	$4\frac{3}{8}$	—
Nieuwe Ned. Petroleum Mij. And.	—	1,000
Oklahoma Petroleum Co.	$111\frac{3}{8}$	—
Oliebronnen in Hannover Mij. (Deb.) ..	$54\frac{1}{2}$	—
Panolan Maatschappij Cert.	260	—
Perlak Petrol. Mij. (6% cum.pr.A.)	$138\frac{1}{2}$	1,000
,, ,, (Common)	—	—
Sumatra-Palembang Petroleum Mij	$140\frac{5}{8}$	500
Tarakan Petrol Mij.	$31\frac{9}{16}$	—
Zuid Perlak Petrol. Mij. (Pref.)..	137	—

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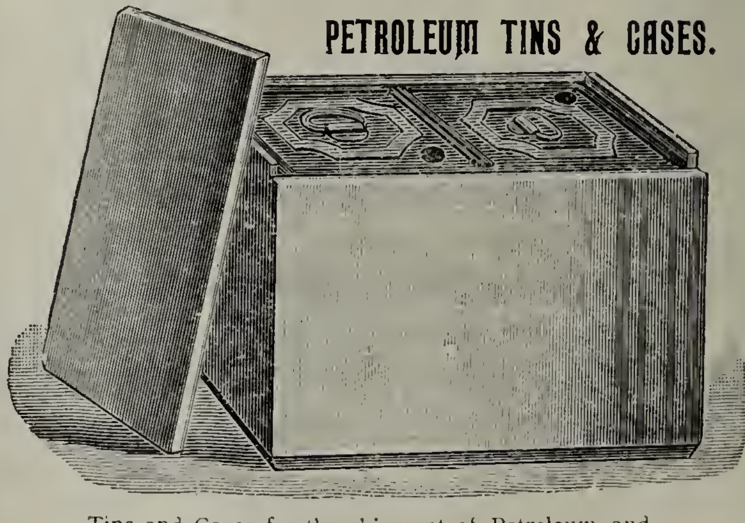

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THE
PETROLEUM REVIEW,
45, St. Mary Axe, London, E.C.
American Office: 150, Nassau Street, New York.

Saturday, February 27, 1909.

ENGLISH CAPITAL FOR THE CANADIAN OIL INDUSTRY.

The eyes of the investing public have lately been turned to the oil fields of Canada, for, consequent upon the energy of a few company promoters, two new limited companies have been registered in this country with a combined capital of £300,000, and the

British investor has been asked to subscribe. We have no doubt that the necessary financial support has been forthcoming, and thus we may take it that to-day many hundreds of small investors, in this our island home, have a direct interest in those petroleum producing territories in Canada, and will anxiously await developments therein. We never like to hear of the downfall of any enterprise, much less one associated with the oil industry, nor do we generally take a pessimistic view of the future, yet we have here to admit—and it is our duty to do so—that there is in our opinion a sorry time before those who have pledged their faith to Canada as an oil-producing country capable of yielding good returns for large amounts of invested capital. The industry, although fostered by a kindly Government which allows a substantial grant upon the crude oil production, has for many years made little or no headway, and upon its pages of history many failures stand grimly out. During the past few years we have seen several companies operating in Canada drop out of existence, and one of the latest failures is that of the Canadian Oilfields, Ltd. —a concern in which English capital very largely figures.

Several other organisations, we are given to understand, are keenly feeling the pinch, and probably ere long they too will fall out of the race. Nor has one to look far for a reason why petroleum-producing companies in the Canadian fields cannot, as a rule, achieve success. We are told that the cost of drilling wells in Canadian fields is cheaper than anywhere else in the world. From our own knowledge, we admit this to be a fact; but we must also admit that in no other oil-producing territory in the world are oil wells worked which give such a miserably low production. In fact, it is well established that one is courting disaster who builds up hopes of drilling wells in those fields of our Dominion which will furnish anything like a fair yield. It is quite possible, of course, for small operators to make very good incomes from operating a few wells in the Canadian fields, but when one has to take into consideration the heavy charges which are always incurred by large companies with their boards of management, several well paid officers, their committee on the oil producing fields, etc., etc., there cannot be any hope, even from the first, that the company can achieve permanent success.

We are not speaking "off the book" in this case, but for the sake of strengthening our own argument, let us confine ourselves to the two new English companies now entering the Canadian fields, and see whether there is the slightest possible chance of the investor ever again seeing even the colour of his own gold, to say nothing of dividends.

The larger of the two companies just floated is the East Tilbury (Canada) Oilfields, Ltd., with its capital of £200,000. It acquires various oil interests, taking over territory upon which there is already a large number of producing wells, and consolidating into one going concern properties which have in the past been carried on separately. The promoters point out in the prospectus that they expect "to pay substantial divideuds," but the pity is that carefullly reading through their public appeal, one gets no wiser as to how these future "substantial dividends" are to be made. In fact, if the audited figures may be thoroughly relied upon, the promoters appear to stand self-condemned. The daily production of the whole of the 52 wells works out at approximately 100 barrels, and the yearly net revenue is about £10,000. This, we are told, shews an annual net return of 26½ per cent. upon the capital invested, from which remark we may take it that the capital invested is something under £40,000. But there is a vast difference between this sum and the capital of the East Tilbury Oilfields, Ltd., and it will be little short of miraculous if the expectations of the promoters as to "substantial dividends" are ever realised. If we might offer one suggestion to those at the head of the new enterprise it would be that they should recollect that a petroleum producing property is liable to depreciate year after year. A little sum placed to depreciation might therefore not be a bad policy.

With regard to the Dominion Oil Co., Ltd., we must admit that the prospectus is of the flimsiest of descriptions, there being nothing disclosed which even justffies the formation of the concern. It takes over a producing property, but really what is produced, and the quantity of the production, is not made public. There are many things in the prospectus which are exceedingly amusing, having been written, no doubt, with a view to divert the attention of readers from the various points upon which they should be informed, to others of a general character. For instance, we are remined that "the consumption of petroleum and its various products, such as petrol, benzine is enormous;" that "the British Navy and the mercantile marine of Great Britain is turning its attention to liquid fuel for economic reasons;" and that "Japan is reported recently to have placed an order in California for 20,000,000 barrels of oil fuel for its navy." The last statement is totally incorrect; the second one is untruthful, for so far the English mercantile marine is not directing its attention to oil fuel; and as to the first statement, it may interest the company's shareholders to learn that, whether the consumption of petrol, etc., is large or small, it matters nought to them, since the analysis of the small sample taken from the company's wells shews an entire absence of benzine fractions.

At its best, Canada is a poor hunting ground for those in search of oil, but when such companies as the two we have mentioned set out to accomplish great things and earn large dividends, their task is absolutely an impossible one, and the inevitable result in store for them must go a long way to injure the serious and systematic exploitation of the world's oil fields.

ANGLO-MEXICAN OILFIELDS, LIMITED.

The Manager reports by cable as follows:—Borehole No. 1: the depth is 1,968 feet; increase 52 feet. The formation is hard grey shale. Borehole No. 3: the depth is 649 feet, increase 108 feet. The formation is soft grey shale.

The Fractionation of Crude Petroleum by Capillary Diffusion.

BY MESSRS.
J. ELLIOTT GILPIN
AND
MARSHALL P. CRAM.

AN IMPORTANT AMERICAN GOVERNMENT BULLETIN.

(Concluded from page 112.)

To collect a sufficient quantity of oil, several tubes were placed in the same container of petroleum, two of the tubes being of glass and the rest of tin. When the oil had reached the top af the glass tubes all the tubes were opened, and the earth from the same level in all the tubes was mixed in tin pails. The oil was then liberated in several successive fractions by the addition of successive amounts of water. If the earth had been thoroughly mixed after each addition of water, the various oils from the same lot of earth would have increased regularly in specific gravity, instead of shewing the variations which they did. For example, the first oil to be displaced by water In grades D and E with so large a volume would not have been heavier than the succeeding oils if the water and earth had been thoroughly mixed before the oil was poured off. If we were to repeat the work, instead of using one common reservoir for all the tubes, we should use a separate reservoir for each tube, and open the tube when the oil in the reservoir was exhausted. This would do away entirely with the use of glass tubes, besides ensuring that the level of the oil in each tube when opened would be practically the same. If a common reservoir is to be used, the tubes should all be packed with practically the same degree of hardness if the oil is to ascend in all with equal rapidity, as the ascent in all tubes is checked at the same time—that is, when the oil in the reservoir is exhausted.

Diminished pressure was obtained by the use of a Chapman water pump, which reduced the pressure to 5 to 12 centimetres Hg., when connected with a system of tubes. In the earlier work the pump was not run through the night, which accounts for the much longer time required for these lots of tubes.

The earth from a tube was divided into six sections, the level to which the oil had ascended in the tube being taken as the point to be measured from. A, the top section included the 8 centimetres next the top; B, the next 8 centimeters; C, the next 18; D, the next 30; E, the next 35; and F, what earth was left. F varied of course, depending on the height to which the oil had risen. In fractionating the crude petroleum in bulk, F was usually discarded, as it was so viscous that it was deemed impossible to pass it through earth again. The specific gravity was measured with a Westphal balance, the temperature of the oil being in every case exactly 20° C.

To study further the fractionation on addition of water, the oil of grade E from lot 16 was collected in 14 fractions. The weight of the earth impregnated with oil before any water had been added was 13·5 pounds, and the weight of the earth containing all the water added, but minus the oil, was 17·5 pounds. The earth was placed in a galvanised iron garbage pail, and the water stirred in with an iron paddle. When the first portion of oil was liberated, the mass was of the consistency of bran, but as more water was added it turned to a fluid paste. When water was added and the pail inclined, oil would continue to drain out for half-an-hour or longer before the addition of more water became necessary. The oil which was liberated by one lot of water, therefore, could be collected in several portions, and this was done to see wherher the oil which comes off immediately after the addition of water is the same as that which drains out later. The letters I., II., etc., indicate that the fractions included were liberated by one addition of water.

TABLE 3.—FRACTIONATION OF OIL OF GRADE E, LOT 16, TABLE 2.

	Specific Gravity.	Cubic Centimetres.
I.	0·821	25
II.	0·818	70
	0·818	70
	0·8193	250
III.	0·818	395
	0·818	350
	0·818	460
	0·820	60
IV.	0·8208	575
	0·2222	55
V.	0·824	170
	0·828	16
VI.	0·827	95
	0·830	45

The first fraction is regularly of higher specific gravity than those immediately following, if only enough water is added to liberate a first fraction of small volume, say about 20 cubic centimetres. As the fraction first obtained becomes larger in volume, it approaches nearer to the second fraction in specific gravity, and will even fall below that fraction if the volume is made too large.

The range of specific gravity covered by this first fractionation of the crude petroleum of specific gravity 0·810 was from 0·800 to 0·830. Fractions of the same specific gravity and of the same grade were united and the products chilled and filtered to remove all the dissolved paraffin possible. This was done out of doors toward the last of December, when the thermometer stood at about 4 degrees to 8c. C. Lower temperatures would not only throw paraffin out of solution, but cause the whole oil to thicken. The oils were filtered through large plaited filters of drying paper, twenty-four hours or more being required for many of the filters to empty completely. The lighter oils in sections A and B deposited no paraffin. Some of the heavier grades deposited as much as 10 per cent. of their weight, accompanied in many cases by a slight change in specific gravity.

The sum of the fractions of oil displaced from the earth is as a rule only about two thirds of the volume of the oil used. A pressure of approximately 200 tons per square inch on the earth from which water has displaced all oil that it will result in the liberation of considerable water but very little oil. When earth which has been pressed is heated to 165 degrees for three hours, considerable water distills over, but much less oil than would be expected; for example, from 75 grammes of earth which should contain 25 cubic centimetres of oil only 4 cubic centimeters of oil were obtained. The earth was removed once from the flask and pulverised, and when the heat was discontinued the earth was thoroughly dry. On extraction with ether in a Soxlet extractor the earth gave a solution having the colour of the original petroleum. The extraction was continued until the extract was colourless. On evaporation of the ether there remained about 8 cubic centimetres of a heavy oil with the colour of the natural petroleum. Pressure, heat and extraction with ether together gave about half the amount of oil which the earth must have contained.

Earth that had been used once was allowed to dry for several weeks at a room temperature until it had lost all appearance of containing moisture. It was then pulverised, sifted and 720 grammes used in a tube with 740 cubic centimetres of the crude petroleum of specific gravity 0·810, with the following results:—

Table 17.—Fractionation of Crude Petroleum with Earth that had been Used Once.

	Specific gravity.	Cubic Centimetres
Eight centimetres at top	—	0
Next 8 ,,	0·8284	10
Next 18 ,,	0·8225	45
Next 30 ,,	0·8143 0·8155	60 80
Rest	0.8175 0.819	83 114
		392

The first oil up the tube is evidently absorbed by heavy material in the earth; the first oil recovered dissolves material from the earth, which increases its specific gravity beyond that of the next fraction.

To see how much of the weight of the earth used the second time was due to material which it had retained from its first use, 300 grammes of earth were mixed with 300 cubic centimetres of crude petroleum and the oil displaced by water. The oil recovered measured 205 cubic centimetres, and the weight of the earth after drying for several weeks at room temperatures was 347·5 grammes. Fully 15 per cent., therefore, of the weight of earth used a second time was solid matter which it had retained from its first use.

In all tests the earth was heated before it was used because it was believed that heating decreased the amount of oil lost in the earth. The earth was heated usually in iron pans on a gas stove until it ceased to form geysers when stirred. A tube five feet long and one and one-quarter inches in diameter, packed with 948 grammes of earth that had not been heated, gave results as follows with 930 cubic centimetres of crude petroleum of specific gravity 0·810, after standing for twenty hours at diminished pressure:—

Table 18.—Fractionation of Crude Petroleum with Earth that had not been heated.

	Specific gravity.	Cubic Centimetres.
Top 8 centimetres	0·803	30
Next 8 ,,	0·8045	38
Next 18 ,,	0·8103	85
Rest	—	440
		593

In a test of water fractionation alone with unheated earth but 242 cubic centimetres of oil was recovered from 500 cubic centimetres of crude petroleum.

The results obtained toward the close of our work indicate that the loss of oil when unheated earth is used is much less than we had supposed it to be. The gain from heating the earth may not pay for the trouble of heating it, and this point should be investigated before any very extensive experiments are again undertaken.

Earth after heating must become thoroughly cold before it is used to pack tubes. The earth holds its heat for several hours, and if it is used the same day on which it is heated, there is apt to be sufficient contraction in the tube to allow the oil to run up the side as it would in a vacuum.

The length of the tubes used was five and one-half feet. A tube nine feet long was connected to the same vacuum pump with several five and one-half foot tubes and held for two days with a constant diminished pressure of about ten centimetres Hg. The oil was drawn to the top of the shorter tubes; these were removed and a second lot substituted, and these also were fully impregnated with oil before the long tube was opened. When it was opened the oil had ascended but 45 centimetres, shewing that the diminished pressure had not penetrated the nine feet of earth and reached the bottom of the tube.

A shorter tube in which the earth was packed very much harder, so that it rang like an iron rod when pounded on the floor, was connected with a vacuum pump at one end and a manometer at the other, and shewed diminished pressure on the manometer when the column of earth was two feet long, but not when it was two feet four inches.

A clay from Topsham, Me., shewed in tubes a power of fractionating as well as of decolourising the higher fractions. Tubes five feet long and one and one-quarter inches in diameter were used, with petroleum of specific gravity 0·806. Compared with fuller's earth, the action was as follows:—

Table 19.—Fractionation of Crude Petroleum with Clay from Topsham, Me., and with Fuller's Earth.

	Specific gravity.	
	Clay.	Fuller's Earth.
Eight centimetres at top	0·799	0·793
Next 8 ,,	0·804	0·800
Next 8 ,,	0·810	0·806
Next 10 ,,	0·810	0·807
Next 30 ,,	0·812	0·8092
Next 45 ,,	0·812	0·8112

Time required:—Clay, 69 hours; fuller's earth, 76 hours.

Neither powdered brick made from the same clay nor powdered feldspar shewed any power of fractionation.

Another similar clay (from Mere Point, Brunswick, Me.) shewed a power of water fractionation, but its behaviour in a tube was not tested. Four hundred grammes of this clay, previously sifted and heated, was mixed with 170 cubic centimetres of crude petroleum of specific gravity 0·806 and allowed to stand for fourteen hours. Water was then added and the following fractions were obtained:—

	Specific gravity.	Cubic centimetres.	Total water present (c. c.).
A	0·8165	24	104
B	0·817	60	133
C	0·8188	20	234
D	—	6	374
		110	

The colour was scarcely changed at all.

SUMMARY.

1. When petroleum is allowed to rise in a tube packed with fuller's earth, there is a decided fractionation of the oil, the fraction at the top of the tube being of lower specific gravity than that at the bottom.

2. When water is added to fuller's earth which contains petroleum the oil which is displaced first differs in specific gravity from that which is displaced afterward when more water is added.

3. When petroleum is allowed to rise in a tube packed with fuller's earth, the paraffin hydrocarbons tend to collect in the lightest fraction at the top of the tube and the unsaturated hydrocarbons at the bottom.

4. When oil is mixed with fuller's earth and then displaced with water about one-third of the oil remains in the earth.

THE OIL FIELDS OF NORTHERN PERU.

The Society of Mining Engineers of Peru have issued a bulletin which contains a detailed and interesting description of the petroleum-bearing district of Northern Peru. It has long been known that there are immense deposits of petroleum in some of the coast districts of the Republic, but as yet there has been no extensive and systematic exploitation of these great reservoirs of natural wealth.

The Province of Tumbes, Department of Piura, in Northern Peru, contains two geographical and geological divisions—that is to say, the coastal plain and the mountainous regions.

Two lithologically distinct formations are found in the area between the Tumbes and Zarumilla rivers, the upper portion of the section being formed by a series of relatively soft clays and sands, and the lower of harder and more compact rock composed principally of sandstones. Some uncertainty exists as to whether the latter formation belongs to the petroleum-bearing clays and sands of Zorritos. The Zorritos coast consists of sandstones of various degrees of hardness, with here and there an argillaceous layer in the upper section, while the lower is comprised of red and dark-brown clays, with lenses of sands and occasional conglomerates. Faults exist in this region.

Investigations of the various wells shew that the most productive groups are situated in front of Zorritos along the margin of the seashore, in the Tusiyal and Peroles canyons, and on the beach near the mouth of the Tijeritas River. Petroleum is found in these wells at depths varying from 260 to 1,640 feet, and in some of the districts—at Tijeritas, for example—three petroliferous strata are known, the deepest of which is less than 400 feet from the surface. The Zorritos petroleum-bearing sands are of local extension, the most productive localities being situated in the strongly-folded formations, where the sands are covered and succeeded by impermeable clays.

At La Breita, near Mancora, an exploratory borehole has been sunk to a depth of 455 feet, petroleum being encountered at 90, 140, 196 and 442 feet respectively, the first three being in conglomerate and sandstone, and the fourth 45 feet above the clay. The sandstone formation merges gradually into red clays, with numerous siliceous bands near the top. The Zorritos wells are in the highest part of this series, the total thickness being approximately 4,000 feet. The Breita well is situated in the central sandstone, which overlies the lower clays. It can, therefore, be deduced that the coastal plain of this province contains two petroleum-bearing strata—the upper one at Zorritos and the lower one at Breita.

The surface geology at Lobitos discloses numerous interstratified beds of sandstones and clays, some of which are highly fossiliferous and belong to the middle tertiary. This zone is on the eastern flank of a fold whose axis lies north-west of the seashore, and extends 50 kilometres farther north to Mancora. Local folds occur, however, which must be taken into consideration in exploring this district for petroleum. Only one petroleum level has been encountered near the surface at Lobitos, but others may exist deeper down.

The formation at Negritos, which is 10 kilometres south of Talara and 25 kilometres from Lobitos, is similar to that of the latter place. The petroleum-bearing rocks are not continuous over large areas, but are found in local sands included between large masses of clay. This signifies that the petroleum zone of Negritos is modified by local folds and faults.

Considering the petroleum belt geologically, it should be borne in mind that the mountainous region contains limestones which, according to the fossils, belong to the most recent tertiary formation, from which it is deduced that the clays and sands lying unconformably upon the limestone must be post-tertiary, and there is reason to believe that the sandstones are older than the limestones. The essential structures for the storage of petroleum exist in the petroleum belt of Northern Peru.

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THE PETROLEUM TRADE OF GERMANY DURING 1908.

According to the official statistics just published by the German Customs Department the quantities of various petroleum products imported into Germany during 1908, as compared with the figures of 1907, was as under:—

	1908 Tons.	1907. Tons.
Illuminating oil	1,016,331	994,414
Lubricating oil	216,887	226,609
Benzine, crude	107,301	110,791
,, refined	8,442	7,040
,, heavy	1,646	92
Crude oil	35,252	26,944
Gas oil	29,597	14,075
Residuals	732	831
Patent turpentine and other mixtures	619	977
Total	1,416,807	1,381,773

The total imports of petroleum products into Germany from the various petroleum producing countries in 1908, compared to 1907, was as under:—

	Tons. 1908.	Tons. 1907.
U.S.A.	945,806	947,606
Austria-Hungary	208,308	128,422
Russia	148,431	172,003
Dutch India	76,722	76,994
Roumania	30,584	46,896
Other Countries or of unknown origin	6,956	9,852
Total	1,416,807	1,381,773

Taking the imports of the various petroleum products separately in regard to the country of origin, we find as follows:—

I.—Illuminating Oil.

	1908. Tons.	1907. Tons.
U.S.A.	828,650	813,828
Austria-Hungary	131,033	81,905
Russia	47,369	72,149
Roumania	8,750	25,696
Other Countries or of unknown origin	529	836
Total	1,016,331	994,414

II.—Lubricating Oils.

U.S.A.	99,053	114,945
Russia	88,511	86,372
Austria-Hungary	26,711	21,759
Other Countries or of unknown origin	2,612	3,533
Total	216,887	226,609

III.—Benzine.

Dutch India	66,161	72,734
Roumania	21,834	21,200
Austria-Hungary	14,944	6,593
Russia	12,360	13,297
Other Countries or of unknown origin	1,490	4,099
Total	117,389	117,923

IV.—Crude Oil.

	1908. Tons.	1907. Tons.
U.S.A.	18,103	18,833
Dutch India	10,561	4,260
Austria-Hungary	6,090	3,793
Other Countries or of unknown origin	498	58
Total	35,252	26,944

V.—Gas Oil.

This article both in 1908 and 1907 came exclusively from Austria-Hungary.

VI.—Residuals, Patent Turpentine and other Mixtures.

Austria-Hungary	225	475
Russia	191	185
Other Countries or of unknown origin	935	1,148
Total	1,351	1,808

The exports of petroleum products from Germany in 1908, compared to 1907, were:—

	1908. Tons.	1907. Tons.
Illuminating oil	862	695
Lubricating oil	10,835	10,552
Benzine, crude	151	76
,, refined	4,495	4,167
Residuals	993	1,628
Other products	9	33
	17,345	17,151

The countries to which petroleum exports were made from Germany in 1908 were:—United Kingdom, 2,525 tons; Holland, 2,630 tons; Sweden, 1,355 tons; Switzerland, 1,192 tons; Denmark, 996 tons; Norway, 712 tons; France, 712 tons; other countries, 685 tons.

The imports of ozokerite and paraffin into Germany during 1908 were:—

	Tons. 1908.	Tons. 1907.
Ozokerite, crude	1,447	1,653
,, refined	349	326
Paraffin scale, crude	10,966	15,113
Soft paraffin	280	373

Of the crude ozokerite imported into Germany in 1908, 1,275 tons came from Austria-Hungary and 125 tons from Russia. Of the refined ozokerite (ceresine) 218 tons came from Austria-Hungary and 110 tons from the United States. The crude paraffin was imported from the following countries:—Austria-Hungary, 5,835 tons; U.S.A., 3,331 tons; Great Britain, 960 tons; Dutch India, 330 tons; and British India, 244 tons. The soft paraffin was supplied:—179 tons from Great Britain and 93 tons from Austria-Hungary.

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THE PROPERTIES OF JAPANESE PETROLEUM.

The article here published was written by Mr. K. Kobayashi, a prominent oil chemist now associated with the Hoden Oil Co., of Echigo, Japan, with the assistance of Mr. H N. Cooper. of Berkley, Cal., Prof. T. Takamatsu, Prof. Y. Kawakita, Mr. M. Tsuzimoto, Chemist at the Japanese Government experimental station, Mr. Kondo, Superintendent of the Nauboku Oil Co., and Mr. T. Tashiro, of the Hoden Oil Co. It appeared in the January issue of the "Californian Derrick," and we congratulate our contemporary upon the publication of so interesting and authentic an article upon Japanese petroleum and its properties.

There are several localities in Japan where petroleum has been found, but the most important territory is the Province of Echigo, situated on the northern coast of Japan. There are five principal groups of oil fields in Echigo: the Higashiyama field, the Nishiyama field, the Niitsu field, the Kubiki field and the Ojiya field.

The Higashiyama field comprises the wells of Katsubo, Hirei, and Urase. The field was discovered in 1890, and the output in 1907 was about 376,111 barrels. Now the field produces about 30,000 barrels a month. The Nishiyama field comprises the wells of Kamada and Nagamine. This oil field was discovered in 1897. The output in 1907 was about 428,656 barrels. The Niitsu oil field comprises the wells of Koguchi and Kumazawa. The presence of petroleum in the field was noted at an early date, but its drilling has been undertaken only a few years ago. The output in 1907 was about 1,117,700 barrels. There are about 200 wells with the modern American drilling system, and also many wells with a simple drilling system called "Kazusabori." The monthly output is about 100,000 barrels at present. The Kubiki oil field comprises Kitano, Hara, Kurashita, and many other districts. Since the oils from the different wells of this section vary considerably in specific gravity, etc., it is important to examine these oils separately. I have examined two varieties of these oils —Kitano and Hara. The output in 1907 was about 81,000 barrels. There are now only about 100 wells, and the monthly output does not reach 100,000 barrels, but this field is considered promising. The Ojiya field was discovered quite recently. The production is not so great as from the Kitano field, but undoubtedly this field will be one of the most promising in the future. The oil from the field is characterised by containing a considerable quantity of lighter fractions.

The following table shews the production of each field :—

District.	1903.	1904.	1905.	1906.	1907.
Niitsu field ..	356,960	600,369	732,870	912,777	1,117,704
Nishiyama field..	348,442	331,838	314,509	567,463	428,656
Higashiyama field	380,474	369,548	308,882	345,565	376,111
Kubiki field ..	103,767	81,039	110,812	90,149	81,720
Ojiya field ..	20,545	21,378	16,031	16,740	8,747
Total	1,210,188	1,404,170	1,483,104	1,933,549	2,012,938

The following table shews the specific gravities and colours of the crude oils from the various localities :—

Higashiyama—		
Katsubo	0·837 ..	Dark brown
Urase	0·884 ..	Dark brown
Hirei	0·868 ..	Dark brown
Nishiyama—		
Kamada	0·895 ..	Greenish black
Nagamine	0·889 ..	Greenish black
Niitsu—		
Kumazawa	0·942 ..	Reddish brown
Koguchi	0 942 ..	Reddish brown
Kubiki—		
Kitano	0·871 ..	Blackish brown
Hara	0·817 ..	Light brown
Kurashita	0·801 ..	Light brown
Ojiya—		
Tokimizu	0·800 ..	Amber

The geological structure is now being studied by our Government geologists. Mr. Lyman has given a detailed description of the principal wells lying in the province of Echigo in his "Geological Survey of Japan." But unfortunately his survey was conducted some thirty years ago, and consequently there is no description of the new oil fields.

In the Higashiyama oil field the three principal oil-producing districts are as follows, in order of productivity: Katsubo, Hirei, and Urase. I have examined Katsubo petroleum. The oil is of a very dark brown colour and has a somewhat offensive smell. Its specific gravity is 0·8971 at 15·5° C. The oil was subjected to fractional distillation, each fraction being one-tenth of the crude oil by volume, and the density of each of the distillates was determined. The following are the results obtained :—

No. of Fraction.	Specific Gravity at 15·5° C.
First product	0·7663
Second product	0·7893
Third product	0·8165
Fourth product	0·8459
Fifth product	0·8692
Sixth product	0·8753
Seventh product	0·8850
Eighth product	0·8904
Ninth product	0·9135

By fractional distillation, referring to boiling point, the following results were obtained :—

Fractions.	Per cent.	Sp. Grav.
Under 150° C	16·0	0·7713
150° to 200°	12·2	0·8180
200° to 250°	9·8	0·8421
250° to 300°	14·0	—
Above 300°	48·0	—

When the fraction under 150° C. was redistilled, it gave the following percentages: Under 70°, 0·4 per cent; 70 to 80, 0·5 per cent.; 80 to 90, 0·5 per cent.; 90 to 100, 0·8 per cent.; 100 to 110, 0·8 per cent; 110 to 120, 2·8 per cent.; 120 to 130, 4·2 per cent.; 130 to 140, 2·4 per cent.; 140 to 150, 3·2 per cent; above 150, 0·4 per cent.

The oil contains 0·343 per cent. sulphur and 0·319 per cent. nitrogen. The sulphur estimation was carried out by oxidising the sulphur by concentrated nitric acid in an assay flask and finally determining it as barium sulphate. The nitrogen estimation was carried out by Kjeldahl's method. The iodine absorption value by Huble's method was 9·909. The oil contains 22½ per cent. of resinous matter. The content of resinous matter was determined as follows: 40 c.c. of the oil was mixed thoroughly with a like volume of benzine free from fat in a graduated cylinder. Then 20 c.c. of concentrated sulphuric acid were added. The cylinder was shaken vigorously for a few minutes and then allowed to settle, until the layer of sulphuric acid became perfectly separated and an increase in the precipitate was no longer observed. The increase in the volume of the sulphuric acid multiplied by 2·5 gave the above results as the content of resinous products. The coefficient of expansion is 0·000074. The method employed consisted in ascertaining the density of the oil at 10° C. and 50° C. respectively, and calculating from the formula $V_0 = V\,[1 - s\,(t_0 - t)]$; s being the coefficient of expansion. The oil contains small quantities of solid paraffin.

Of late years some improvement has been made in the process of refining. At a large refinery the oil was distilled, with the following results: Light oil, 15 per cent.; burning oil, 30 per cent.; intermediate oil, 15 per cent.; heavy oil, 40 per cent. The yield of the various products depends upon the composition of the crude oil, but it also depends upon the means of distillation and the method of purification. I will fully describe the process now in use for refining the oil under another subject.

The Higashiyama oil contains a considerable quantity of sulphur, as shewn in the above analysis. A peculiar pungent gas is produced during the distillation of the oil. The gases are volatile, especially in the fractions above 230° C. I examined this gas by conducting it into many bottles, which were previously provided with many various reagents, such as copper sulphate, lead acetate, hydrochloric acid, sulphuric acid, caustic soda, etc. I have proved that this gas is composed of some sulphide of a hydrocarbon, such as alkyl or allyl, and there is also present some hydrogen sulphide.

The sulphur compounds occur chiefly in the higher boiling-point fractions; therefore, in the distillation of the crude oil, sulphur tends to concentrate in the undistilled residues. The percentage of sulphur is progressively increased from lighter to heavier fraction. I have established this fact by various experiments, the following results being taken from one of them :—

Fractions.	Percentage of Sulphur.
Under 150° C.	0·016
150° C. to 200° C.	0·026

The sulphur compounds of the Higashiyama oil have not yet been investigated, but it seems to be in the form of alkyl sulphide, and not in a free state or as mercaptans. There is no doubt that the Higashiyama oil is a sulphur petroleum.

Why is sulphur petroleum objectionable? Sulphur compounds in burning oil produce the so-called "white incrustation" on lamp chimneys, and exercise an injurious effect on the illuminating power of kerosene. The white incrustation adheres to the inner side of lamp chimneys when the oil is burnt in lamps with a flat burner. I have made a cursory examination of this white incrustation. It is a white film, and forms gradually during the burning of the oil. The position and shape of the white incrustation vary with the construction of the burner itself, especially with the length of the wick holder. It adheres tenaciously to the inner side of the chimney, and is not easily removed by rubbing. It is not volatile. It dissolves easily in water or ether, but not so easy in absolute alcohol. If we prepare a solution of this white incrustation and evaporate the solvent gradually on a watch glass, then groups of microscopic crystals (probably hexagonal system) will be seen. This white incrustation does not contain nitrogen. The solution reddens blue litmus paper, and a white precipitate is produced by the addition of two or three drops of barium chloride. On further analysis, I have proved that the white incrustation is not a sulphate, but is composed of some sulpho-compound of the aromatic hydrocarbons.

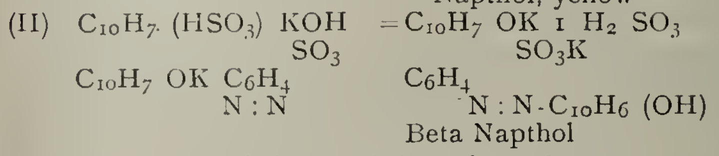
I took the solution of white incrustation from fifty chimneys, added concentrated nitric acid, and boiled two or three minutes. Caustic potash was added to the solution until it became alkaline, after which the solution shewed a beautiful yellow colour. I have proved that this solution owes its yellow colour to the formation of napthol yellow, not to picric acid.

I fused the white incrustation with caustic potash in a platinum dish and lixiviated the fused mass with distilled water. On the other hand, I also prepared the diazotized solution of aniline sulphonic acid. The above two solutions were mixed, after which the solution became orange coloured. This colour is due to the formation of beta-naphthol.

From the results of the above two experiments, it seems true that the chief constituent of the white incrustation is naphthol sulphonic acid, $C_{10}H_7\,(HSO_3)$. If we assume this to be a fact, the above experimental results will be represented by the following chemical formula :—

$$\begin{array}{lll} \text{(I)} & C_{10}H_7\ (HSO_3)\ 2\ KOH & = C_{10}H_7\ (OH)\ K_2SO_3 \\ & C_{10}H_7\ (OH)\ 2\ HNO_3 & = C_{10}H_5\ (NO_2)\ OH\ 2H_2O \\ & C_{10}H_5\ (NO_2)\ 6\ KOH & = C_{10}H_5\ (NO_2)\ OK\ H_2O \end{array}$$

Napthol, yellow



$$\begin{array}{lll} \text{(II)} & C_{10}H_7\ (HSO_3)\ \underset{SO_3}{KOH} & = C_{10}H_7\ OK\ 1\ H_2\ \underset{SO_3K}{SO_3} \\ & C_{10}H_7\ OK\ \underset{N:N}{C_6H_4} & \ \underset{\quad N:N\text{-}C_{10}H_6\ (OH)}{C_6H_4} \end{array}$$

Beta Napthol

When oil containing sulphur in a free state or combined burns in lamps of insufficient draft, sulphurous acid gas is given off. The vapour given off from the incomplete combustion combines with oxygen to form napthalene, which is produced by the condensation of both paraffin and naphthalene hydrocarbons. Thus naphthol sulphonic acid will be produced as a white incrustation.

Many difficulties have been experienced in the removal of sulphur from the distillates of the Higashiyama oil. The nature and production of the white incrustation will depend upon the construction of the lamp burner used; therefore when we use the improved burner, with a round wick, there is no difficulty in burning the oil. Notwithstanding this, however, it is a most important question to remove these sulphur compounds economically. There are thirty or more patents for the desulphurisation of petroleum in foreign countries, but none of them are successful. Of these methods, the cupric oxide process is said to be the most successful. Fuming sulphuric acid is considered best for refining California crude oil. I have tried various methods of desulphurisation, on the advice of Prof. T. Takamatsu and Prof. Y. Kawakita, but these investigation are not within the scope of this report. I will describe these experimental results under another subject.

(*To be continued.*)

THE PETROLEUM RESOURCES OF THE UNITED STATES.

Important . .
Government.
Report. . . .

WASTE IN THE USE OF PETROLEUM AND HOW TO PREVENT IT.

(*Concluded from page 116.*)

"General industrial conditions have had little effect in regulating the production of petroleum, as has been the case with coal. The purchaser for cash has always been on hand. Even if the price paid has been low, it has been above the cost of production. The surplus has been readily marketed abroad, or burned as a substitute for coal.

"Oil's independence of industrial conditions is also shewn by the inability of the production to respond to greatly increased trade demand. It requires the development of new territory to greatly increase the production. Otherwise, the developed fields rapidly fall into the stage of decline, which is more or less rapid as the oil sands are loose or compact. Without the opening of new territory there is no probability of continuing the indicated rate of increase. The production of the present year could not be maintained beyond a very few years The duration of the supply will thus be extended, but with a production inadequate to legitimate demands, as the production in the past has been excessive.

"Under conditions of an insufficient supply, the relations of price to production must more closely follow supply and demand, the conditions governing which have been pointed out in connection with our better known supply of coal, but there must always remain the exceptional feature of rival producers vieing in the extraction of petroleum from the same reservoir.

"The production tables shew that in seventeen years Pennsylvania and New York have decreased to a third of their greatest output. The decline has become quite regular, and, logically extended, renders the production negligible in ten years. The production per well per day has fallen from a maximum average of 207 barrels to 1·7 barrels, shewing that increasing the number of wells is not significantly effective in stimulating the product. In fact, many very old wells are contributing to the product with as little as one-tenth of a barrel per day.

"The decline in West Virginia has reached 56 per cent. of the maximum output, and new developments of great magnitude are not looked for. This State is also in the rapidly declining class.

"The rate in Kentucky and Tennessee is not easily predicted, but there is no territory which has yet been proved to rank among the great producers. Ohio and Indiana are declining more rapidly at present than Pennsylvania. In Texas the decline is also rapid, and a total of only 200,000,000 barrels is estimated from the present pools. In Kansas the decline has been rapid, and has now reached a small fraction of the previous yield, and a stage where the future decline will be slower.

"Illinois, Oklahoma, in the Mid-Continent field, and California, can be expected to shew greater yields. In Illinois the limitations of the new fields have not been reached, and the possibilities of considerable extensions render an increase in the field probable for several years. The same is true in Oklahoma, particularly in the so-called 'shallow pool.'

"Regarding the limits of time within which the present supply will be exhausted, it is clear that, considering the minimum quantity of petroleum in the United States as 15,000,000,000 barrels, and continuing the present rate of increase in production, the supply would be exhausted in about 1935. If the present annual production were continued without increase, ninety years would be required to exhaust this estimated minimum quantity. A reasonable view of the situation makes it probable that the present annual rate of production will be increased slightly through the developments of Illinois, Oklahoma, and California, but that within a very few years a marked decline will be noted, and this will continue with increasing value for the oil product and an insufficient quantity for the legitimate demands of the industry after another decade, and that the production on a reduced scale will continue for a long time but in an amount unsatisfactory to industrial necessity, except as supplemented from new fields.

EXTENT OF WASTE IN THE EXTRACTION OF PETROLEUM.

"Waste, as is understood in the natural gas industry, has been markedly absent with petroleum. Very rarely it has proved impossible to furnish storage for some exceptionally prolific gusher. In 1907 lack of storage in the Mid-Continent field resulted in wasting a large amount of petroleum, estimated at 1 per cent. of the total amount of production for which no storage was available. A similarly exceptional waste resulted from the unexpected gushers in the Spindle Top pool in Texas.

"The record of the United States in providing sufficient storage in steel tanks is far better than in the other petroleum fields of the world. In Russia, repeated lack of foresight in opening unusually strong gushers has not only led to enormous waste of petroleum, but to fires which have involved the destruction of large cities. Nowhere in the world have the emergencies of petroleum production been met with the keen foresight and prompt treatment that has been characteristic of the United States.

"Another form of waste which is characteristic of petroleum products of Europe and of the East, and which has been ably avoided in the United States, is the evaporation of gasolene and similar light products when the petroleum is exposed to the air in open tanks. These light products form the most valuable portion of petroleum. A thin layer of any ordinary light crude petroleum will become heavy and valueless by exposure to the sun of a single day. This has been a source of great loss in the open earthen tanks which have been much used in Russia. In the United States, on the other hand, only under very exceptional circumstances has the earthen tank been used, and then only pending the completion of steel tankage. The rapidity with which steel tanks, even holding as much as 55,000 barrels, have been constructed, to the extent of farms of these tanks, forms a remarkable tribute to the engineering skill of the oil transportation companies. It is due also to the conditions of the iron industry, which make it possible to furnish suitable steel promptly for such emergencies. On an average one tank per day was completed in the Mid-Continent field in 1907.

WASTE IN THE USE OF PETROLEUM.

"The principal waste in the petroleum industry is connected with its utilisation. In the face of an approaching insufficient quantity, the use of petroleum should be limited to the purposes for which it is essential, and for which no other material can be substituted.

"Petroleum may be regarded as almost essential for the lighting of isolated houses, and for every small establishment not in connection with a gas or electric supply. The prices at which lamp oils can be sold are essentially lower than the prices of any substitute under isolated conditions. The economical necessity, therefore, of securing the greatest amount of illuminating oil from crude petroleum is evident.

"A still more essential use of petroleum is for lubricating all bearings in every kind of machinery. This is necessary in the development of power by any means. At least one half-pint of lubricating oil is used for every ton of coal converted into power, and when this power is carried farther to its ultimate uses, such as the moving of railroad cars, hand-power, including sewing machines, clocks, watches, etc., this necessary oil is probably doubled in amount. The conservation, therefore, of a proportionate amount of lubricating oil, consistent with all industrial activity, must become a part of the general plan for civilised progress. It should be noted that from 10 to 15 per cent. is as large an amount of lubricating oil as is now obtained from crude petroleum.

"In 1907, 18,855,691 barrels of crude petroleum were burned as fuel in locomotives, and a large proportion of the California production was used for the development of power, principally by burning it for the generation of steam. Whenever a large increase is made in the production of petroleum, with a corresponding decrease in price, the producers are grateful for any outlet for their oil, and sell it for such low-grade uses, in which it brings not more than one-hundredth part, and has brought as low as one-thousandth part of the maximum price for high-grade petroleum products. Much of this crude petroleum, had it remained stored in the ground, could have been converted into far more valuable products. Much petroleum has been used for oiling roads. The skilful application of petroleum residues to poor road surfaces has proved so effective that this use of petroleum residues is justifiable, but the use of crude petroleum for such purposes can seldom be considered in any other light than as a waste, especially as coaltar residues, waste products of the coking and illuminating gas industry, serve this purpose well enough.

"The greatest waste of petroleum has been in exporting crude petroleum and petroleum products to foreign countries. The necessity for it has been due to the sudden increase of production of petroleum, due to the discovery and immediate development of the larger fields, and only by this means has it been possible for the producers of petroleum to continue the practice of furnishing a constant market for petroleum, wherever produced. This immediate purchase of the product has meant a gain of millions of dollars to the producers.

"The cessation of these exports is included in the recommendation to be presented farther on in this article for preventing further waste of petroleum.

METHODS OF PREVENTING OR LESSENING WASTE.

"At present more petroleum is being produced than is necessary for the legitimate demands of the industry. Within ten years the present petroleum fields cannot profitably produce enough for these legitimate requirements. Inasmuch as the petroleum lands now owned by private interests are leased by rival concerns, it is impossible to prevent each rival from producing petroleum as rapidly as possible. The only direction in which production can be checked is with the petroleum contained in public lands. Offering such public land for entry at a nominal price is nothing more than temptation to the private citizen to waste petroleum by over-production, since lands yielding hundreds of dollars in petroleum per acre can be obtained for a nominal sum. Every acre of public land believed to contain supplies of petroleum or natural gas should be withdrawn from every form of entry, and should be subjected to an equitable system of lease. By this means undoubtedly a large amount of petroleum would be reserved for use when the supply becomes inadequate to industrial demands.

"The use of petroleum as a form of power is justified on the Pacific coast, provided attention is given to securing the maximum amount of power per unit of oil. This is not consistent with burning oil under boilers for the production of steam, but prompt study should be given to the development of internal combustion engines capable of using crude petroleum, or more particularly, less valuable residuum. It should be noted that the work of private enterprise has already given much to the successful solution of this problem.

HOW SUPPLIES OF PETROLEUM MAY BE EXTENDED.

"Legislation tending to the capping of gas wells to preserve the pressure in the petroleum fields, and to prevent the unnecessary encroachment of water, should be extended to all States where petroleum is produced. After the practical exhaustion of the field, this encroachment of water may be looked upon as a means by which the remaining petroleum can frequently be washed into smaller but still profitable pools—a system which is already intelligently used in this country.

NECESSITY OF SCIENTIFIC RESEARCH.

"For the prevention of waste and the conservation of petroleum, the most practical recommendation seems to be the encouragement of scientific research in the study of the conditions of occurrence of petroleum in the earth, in order to lessen the expense of discovery of new pools. A second line of scientific research, of even greater value, should consider any fundamental studies of the nature of all kinds of petroleum, with a view to converting less valuable varieties into higher grades, and for the production of greater proportions of the absolutely necessary lubricating oils from crude petroleum. Such scientific study should be initiated at once, to be of benefit when the present petroleum supply becomes inadequate.

RECOMMENDATIONS.

"Three conclusions are self-evident from this report.

"First.—It is absolutely necessary for the preservation of an adequate supply of petroleum, that all public lands where petroleum is probable, should at once be withdrawn from entry.

Second.—"A general investigation of the conditions of accumulation of petroleum and its geographic distribution should be undertaken, in order that the petroleum-bearing lands may be selected.

"Third.—Fundamental scientific study of the nature of petroleum, especially with a view to securing the greatest yields of the most valuable constituents, and even for transmitting one oil into another, is required for its most intelligent use."

AMERICAN NOTES.

Glenn Pool Extension.—By the bringing in of several 200-barrel producing wells, the Glenn Pool has recently been considerably extended.

New Californian Corporations.—Among the new companies recently formed to operate in the Californian fields are the London Petroleum Co. (capital $1,000,000), the North McKittrick Oil Co. (capital $500,000), and the Uno Oil Co. (capital $25,000).

To Harass the Oil Industry.—A bill has been introduced at Guthrie, which aims at regulating the petroleum industry of Oklahoma. It has aroused bitter complaint throughout the oil fields, who recognise in it an attempt to harass the industry.

A New Trunk Pipe Line.—The survey has been completed for the trunk pipe line for the Prairie Oil and Gas Co., which is to connect the Oklahoma field to Northern Louisiana. By this line, the producing fields will be connected with the seaboard at New Orleans.

Property Transfer.—It is reported that the California Oil and Gas Co. has disposed of its 4,500 acres of leases and two gas wells in the northern part of Cherokee county to Philadelphia capitalists for a price of $100,000. For the most part the territory is practically unproven.

Volcanic Eruption.—Fears are now entertained that the remarkable well which came in upon Messrs. Pearson and Son's property in Mexico last year, and then caught fire, may turn into an active volcano. The first evidence of this was apparent a week or two ago, when in addition to the great volume of boiling water which the well is giving, a large quantity of volcanic stone was thrown out.

Promising Canadian Gas Field.—The Toronto Oil and Gas Syndicate, which has leased considerable land in West Toronto and Cooksville, states that very shortly it will, by developing its holdings, be in a position to supply the whole of the City of Toronto with cheap light and fuel. An oil expert, who has recently visited the company's properties, reports that he is of opinion that the syndicate possesses the richest oil and gas field in Canada.

Important Kentucky Developments.—Developments are to be shortly undertaken upon a very large scale in the famous Burning Springs region of the Kentucky oil fields. Messrs. Guffey and Galey, of Pittsburg, have secured leases upon several thousand acres of very promising territory, and as soon as the mountainous roads permit of the transport of machinery, several wells are to be sunk without delay. It may be remembered that several years ago the same gentlemen conducted searches in the same locality, for at that time it was considered that development work was premature.

ENGLISH PATENTS.

(Specially contributed by Messrs. EDWARD EVANS & Co. Consulting Engineers, Chartered Patent Agents, and Enrolled Paten Attorneys, of the United States, of 27, Chancery Lane, London, W.C.

APPLICATIONS FILED IN GREAT BRITAIN.

Improvements in or relating to Carburettors for Petrol and like Oil Engines.—Cragie Gyle Borthwick, 57, Barton Arcade, Manchester. No. 2146 of 1909.

Improvements in Regulating Prime Movers, particularly Petrol Engines and the like.—Henry Leitner, 4, South Street, Finsbury, London. No. 2220 of 1909.

APPLICATIONS PUBLISHED IN GREAT BRITAIN.

Reversible Petroleum and Compressed Air Motors.—Marius Berliet. No. 2166 of 1908.

This relates to an internal combustion engine, having means for supplying compressed air to the cylinder for starting and reversing, and as an auxiliary source of power during ordinary running, an arrangement for reverse running in which only the action of the mechanism operating the compressed air admission valves is changed, the compressed air which is admitted on every fourth stroke exhausting through the valves, which normally serve for the explosive mixture, the reversed running being performed by power derived from the compressed air alone.

The American Oil Market.

New York, Week ended Feb. 13th.

Despite a decrease in the number of completions and an increase in the duster list, as compared with the previous week's statistics, the new production for the interval in the fields east of the Mississippi river has scored a gratifying gain. The most noteworthy contribution to this end is to be credited to South-eastern Ohio, the daily average being 1,511 barrels from 28 successful wells, against 320 barrels from 17 producing wells, formerly noted. In this section, Perry county results were the most conspicuous, four of the seven wells drilled yielding 416 barrels as the daily average. In Monroe county eleven wells were completed, nine of which were good for 330 barrels. Fairfield county was also the scene of encouraging returns, 225 barrels representing the daily aggregate of the four wells in the producing class. A feature of Jefferson county operations was the bringing in of a producer which was regarded favourable for a 200-barrel well, marking an extension of the Mingo pool to the south-west. A later report of the well's capacity indicated a decline to little more than 100 barrels a day. Repeated efforts to find a lead from the Alliance pool of Columbiana county continue unavailing. Wildcatting is in progress in the shallow sand districts of Columbiana, Jefferson and Carroll counties in South-eastern Ohio. West Virginia results for the week are less favourable, development work having experienced more of a set back and occasioning a proportionate decline in the new production. There is, however, a feature of more than usual interest in the week's summary, namely, the exceptional producer completed in the Sheridan district of Lincoln county. It was credited with starting at the rate of 250 barrels a day, and subsequent reports were to the effect that it was holding up at about 190 barrels. Lincoln county has been the scene of principal activity in the high-grade fields for several months, says the *Oil, Paint and Drug Reporter*, but the producers, while of regular occurrence have not been large, averaging between 30 and 50 barrels a day. The formation in which the more favourable result was achieved is regarded by operators as treacherous, a reputation that has since been confirmed, another test coming in a duster. Ritchie county maintained a fairly good record, the three wells completed during the interval having an aggregate of 125 barrels daily. A 250-barrel producer attracted keener interest to the deep sand developments of Monongalia county in the same State. Operations continue backward in the Indiana end of the Lima field, the scarcity of gas for fuel purposes impeding development work. The new production for the week, however, was materially in excess of that previously noted from the same number of completions. In the North-western Ohio section considerable work is in progress, considering the season, and by spring the district promises to experience its greatest activity in recent years. Our correspondent in the Mid-Continent field writes of unusually quiet conditions there and in consequence of the difficulties that operators declare have been encountered of late in the form of hostile legislaiion, the question of a general shutdown is being agitated.

Refined and Products.—A fractional decline in the local schedule for refined during the interval varied the even course the market has followed of late. Competition was regarded as the occasion for the unfavourable price development. Quotations for export were apparently steady at the recently ruling basis. The volume of foreign trade for the week was of fairly sustained proportions, our record of clearances shewing a total of 10,610,450 gallons (5,165,290 gallons in bulk), against 10,794,390 gallons for the previous week. No additional engagements for forward shipment were reported. Intimations lately current that quotations for the products were more susceptible to shading practice found confirmation during the week with the announcement of a ½c. decline in the market schedule, establishing prices at 13¾c. for auto naphtha, 12¾c. for V. M. and P. naphtha, 22¾c. for 86 degrees gasoline and 13¾c. for stove gasoline. Competition has lately been stimulated as a result of light trading. The export movement in naphtha for the week comprised 8,400 gallons, against 139,590 gallons previously noted.

CLOSING QUOTATIONS.

Crude at the Wells.

The quotations for oil represented by credit balances were :—

	Week ended Feb. 13. 1908.	Week ended Feb. 13 1909.
Pennsylvania	$1·78	$1·78
Tiona	1·78	1·78
North Lima	0·99	1·04
South Lima	0·94	0·99
Indiana	0·94	0·99
Illinois, heavy, below 30 deg. ..	0·60	0 60
Kansas and Indian Ter., 32 deg and above	0·41	0·41
Heavy	0·28	0·28
Humble, Tex.	0·73	0 53
Saratoga	0·71	0·53
Sour Lake, Tex.	0·75	0·53
Jennings, La.	0·70	0·55
Canadian Oil :—		
Petrolia	1·34	1·44
Oil Springs, less pipeage	1·41	1·51

Refined—For Export.

In cents.		Week ended Feb. 13 S.W. 110 test.	Week ended Feb. 13 W.W. 150 test.
Barrels, cargo	per gal.	8·50	@10·00
Philadelphia	..	8·45	@ 9·95
Bulk, New York	..	5·00	@ 6·50
Bulk, Philadelphia	..	4·95	@ 6·45
Cases, New York	..	10·90	@12·40
Cases Philadelphia	..	10 85	@12·35

Refined in Cases—110 Fire Test.

	Week ended Feb. 6. 1909.	Week ended Feb. 13. 1909.
3,000 to 10,000	11·05	11·05
1,000 to 3,000	11·10	11·10

Refined—Jobbing Lots.

In barrels, pkgs. included.

		Week ended Feb. 6.	Week ended Feb. 13.
120 fire test, S.W. ..	in barrels	12	11¾
130 fire test, S.W. ..	.. ..	12½	12¼
150 fire test, W.W. ..	.. ..	13½	13¼
In bulk from tanks	.. ..	10	9
300 fire test	.. ..	13¾@14	13@13¾

Naphtha and Gasolene.

	Week ended Feb. 6.	Week ended Jan. 13.
Naphtha, V. M. and P. deod. ..	13·00	12¾
Gasolene, 86 deg.	23·00	23¾

Pennsylvanian Oil Runs from Feb. 4th to Feb 9th were :—Feb. 4th, 183,989* ; Feb. 5th and 6th, 144,924 ; Feb. 7th, 358,283* ; Feb. 8th, 181,541 ; and Feb. 9th, 177,682.

* Includes Illinois Oil.

The Deliveries of Pennsylvanian Oil from Feb. 5th to Feb. 10th were:—Feb. 5th, 250,820* ; Feb. 6th and 7th, 357,185 ; Feb. 8th, 266,339* ; Feb. 9th, 228,906 ; and Feb 10th, 140,560.

* Includes Illinois Oil.

Clearances for the Week.

During the week ended Feb. 11th and since Jan. 1, the clearances of petroleum, in gallons, from the port of New York, were as follows :—

	Week.	Year.	1908.
Refined	10,610,450	65,269,630	68,270,820
Crude	1,641,620	5,276,030	1,538,610
Naphtha	8,400	1,807,330	774,160
Residuum ..	13,600	60,850	459,450

Export Statistics.

The total exports from the port of New York and from the United States have been :—

	Gallons.
From New York, week ended Feb. 11th ..	15,788,887
Total from New York, from Jan. 1st, 1909 ..	92,303,203
Same period last year	92,566,371
Decrease	264,168
From United States, week ended Feb. 11th	30,392,987
Total from United States, since Jan. 1st, 1909	161,359,540
Same period last year	167,243,266
Decrease	5,883,726

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The "Review" Shipping List.

FEBRUARY 26, 1909.

(*The following abbreviations are used in this table*:—L. Left; P. Passed; Arr. Arrived; Sp. Spoken; Tr. Trading.)
Anglo-American Co.'s vessels marked thus (□): the Anglo-Saxon Co.'s tankers thus (*): and Messrs. Lane and Macandrew's thus (†).

Vessel.	From.	For.	Latest Date and Position.
ALCHYMIST	Lisbon	Southampton	Arr. Feb. 23, sd. Dieppe same d'y
ALICE ET ISABELLE (Fr. bq.)	New York	Rouen	Arr. Dec. 16, in Pt Jan. 18, laid up
AMERICAN	Batoum	Antwerp	S. Constant'ple, Feb. 14
APPALACHEE □	Algiers	Kustendje	Arr. Feb. 16, left Pt. Said, Feb. 17
APSCHERON	Batoum	Genoa	P. Constant'ple, Feb. 24
ARAL	Algiers	Sea	P. Dungeness, Feb. 24
ARAS	Batoum	Amsterdam	P. Gibraltar, Feb. 20/1
ASHTABULA □	San Francisco	Moji	At Yokohama, about Feb. 10
ASTRAKHAN	Copenhagen	Tyne	Arr. Feb. 23
AUGUSTA	Puerto Mexico	London	S. Newport News, Feb. 14
AUGUST KORFF	Philadelphia	Avonmouth	P. Reedy Island, Feb. 26
AUREOLE	Port Arthur (Texas)	Antwerp & London	Arr. Feb. 20, in Port, Feb. 24
BAKU STANDARD	Ely Harbour	Cardiff	Arr. Jan. 24, in Port, Feb. 23
BALAKANI†	Hamburg	Port Arthur (Texas)	P. Dover, Feb. 10
BATOUM	Singapore	Channel	At Suez, Feb. 20
BAYONNE	Batoum	Savona	Cld. Genoa, Feb. 22
BEACON LIGHT	Penarth	Philadelphia	P. O. Hd. Kinsale, Feb. 17
BLOOMFIELD	Manchester	Emden & Galveston	P. Dover, Feb. 24
BORJOM	Alexandria	Batoum	Arr. Feb. 9
BRILLIANT	Philadelphia	Copenhagen	P. Butt of Lewis, Feb. 22
BROADMAYNE	Tonsberg	Tyne	Arr. Feb. 13, in Port, Feb. 23
BULLMOUTH*	Freshwater	Tsingtan	S. Woosung, Feb. 14
BULYSSES*	Saitozaki	Singapore	L. Feb. 19
BURGERMEISTER PETERSEN	Stettin & Tyne	Philadelphia	Arr. Feb. 18
BUYO MARU	Sabine Pass	Yokohama (via Suez)	At Singapore about Jan. 21
CADILLAC	Barrow & Belfast	New York	S. Belfast, Feb. 18
CALCUTTA (B. b.) □	San Francisco	Tsingtan	Arr. Jan. 30
CAPTAIN A. F. LUCAS (with S.O. Barge 95)	New York	Halifax	Arr. Feb. 13, cld. Feb. 15 on return
CARDIUM*	Batoum	Bombay & Cochin	L. Feb. 19
CARPATHIAN†	Newport News	Antwerp	L. Feb. 18
CAUCASIAN†	London	Tyne	P. Gravesend, Feb. 24
CHARLOIS	Amsterdam	New York	P. Scilly, Feb. 24
CHESAPEAKE □	Kurrachee	Singapore	L. Feb. 7
CHESTER	Antwerp	Kustendje	S. Constant'ple, Feb. 19
CHEYENNE	Kustendje	London	C. Constant'ple, Feb. 16
CITY OF EVERETT (with S.O. Barge 94)	Portland (Me.)	New York	L. Feb. 14
CIUDAD DE REUS	Rouen	New York	L. Feb. 4
CLAM*	Singapore	Saitozaki	L. Feb. 3
CLEMATIS	Fernandina	Antwerp	S. Newport News, Feb. 15
COALTAR (s.)	Dordt	Selzaete	Arr. Feb. 20
COL. E. L. DRAKE	—	—	Coasting U.S. and Pacific
COWRIE*	Shanghai	Palembang	L. Feb. 20
CUYAHOGA □	Shanghai	Singapore	Arr. Feb. 6
CYMBELINE	Newport	Port Arthur (Texas)	L. Feb. 19
CZAR NICOLAI II.	Hamburg	Batoum	P. Tarifa, Feb. 15
DAGHESTAN	Hamburg	Tyne & Batoum	P. Gibraltar, Feb. 19
DAKOTAH □	San Francisco	Shanghai	L. Feb. 12
DELAWARE □	Liverpool	Philadelphia	L. Feb. 21
DERBENT	Antwerp	Batoum	Arr. Feb. 20
DEUTSCHLAND	New York	Hamburg	P. Prawle Pt., Feb. 24
DIAMANT	Philadelphia	Copenhagen	P. Reedy Island, Feb. 16
EDWARD DAWSON	Port Arthur (Texas)	Liverpool	Sd. Norfolk (Va.), Feb. 15
ELAX*	Singapore	Yokohama	L. Feb. 13
EL LOBO	Campana	Lobitos	L. Feb. 16
ENERGIE	New York	Konigsberg	L. Feb. 11
ERIVAN	Tyne	Batoum	Sd. Constant'ple, Feb. 24
ETELKA	Marseilles	Batoum	Sd. Constant'ple, Feb. 12
EUPLECTELA*	Tyne	Kustendje	At Gibraltar, Feb. 13-14
EXCELSIOR	Nordenhamn	Tyne	Arr. Feb. 24
FRANCE MARIE (French bq.)	Philadelphia	Cette	Arr. Feb. 19
GEESTEMUNDE	Philadelphia	Rouen	L. Feb. 18
GENESSE □	New Orleans	Sabine	Arr. Feb. 16
GEORGIAN PRINCE	Cardiff	Philadelphia	L. Feb. 6
GOLDMOUTH*	London	Batoum	Arr. Feb. 20
GUTHEIL	Philadelphia	Christiana	P. Del. Break., Feb. 5
HAINAUT (Du. sh.)	New York	Antwerp	L. Jan. 31
HARRY WADSWORTH	Liverpool	Hull	Arr. Feb. 22
HELIOS	New York	Rouen	Arr. Feb. 20
HERMIONE	Tyne	Philadelphia	P. Butt of Lewis, Feb. 11
HESPERUS	Tyne	New York	L. Feb. 23
HOTHAM NEWTON	Kustendje	Marseilles	Arr. Feb. 17, in Port, Feb. 23
HYRCANIA	Batoum	Manchester	P. Gibraltar, Feb. 22-23
IOANNIS COUTZIS	Cardiff	Piræus	L. Feb. 18
IROQUOIS □ (towing barge Navahoe)	London	New York	130 miles. W. of Lizard, Feb. 16
J. B. AUG. KESSLER	Cardiff	New York	L. Feb. 20
JAMES BRAND	Grangemouth	Tyne	Arr. Feb. 24
JOYO MARU	Port Arthur (Texas)	Avonmouth	L. Feb. 18
JULES HENRI (French bq.)	Philadelphia	Cette	L. Feb. 18
KURA	Newport	New York	P. Old Head Kinsale, Feb. 13
LA CAMPINE	Antwerp	New York	Arr. Feb. 15
LA FLANDRE	Ghent	Philadelphia	At Fayal, Jan. 25
LA HESBAYE	Antwerp	Philadelphia	P. Prawle Pt., Feb. 11
LACKAWANNA □	Kustendje	—	At Port Said, Feb. 23
LANSING	San Francisco	Ancon	L. Feb. 1
LE COQ†	Vigo	New York	L. Feb 16
LOUTSCH	Batoum	Havre	Anchrd. Gallipoli, Feb. 8
LUCERNA	Tyne	Laaverdesick	P. Sagres, Feb. 18
LUCILINE†	Algiers	Rouen	L. Feb. 23
LUMEN	Tyne	New York	P. Dunnet Head, Feb. 14
LUTETIAN†	Havre	Kustendje	P. Ushant, Feb. 16
LUX†	Cette	Novorossisk	L. Feb. 23
MAKKAVEI	Batoum	Odessa	L. Jan. 24
MANHATTAN	New York	Venice	Arr. Feb. 14
MANNHEIM	Hamburg	New York	Arr. Feb. 19
MARGARETHA	Hull	Batoum	P. Dungeness, Feb. 12
METEOR	Vladivostock	Batoum	Arr. Feb. 8
MEXICAN PRINCE	Christiana	Stockton	Arr. Jan. 19, in Port, Feb. 22
MIRA	—	—	In Port Blyth, Jan. 26, laid up
MUREX*	Callao	Honololu	Arr. Feb. 23 for Yokohama
NARRAGANSETT □	London	New York	In Wireless Com. Browh'd, Feb. 19
NEWYORK	Rotterdam	New York	P. Scilly, Feb 22

Vessel.	From.	For.	Latest Date and Position
NIAGARA	Moji	San Francisco	Arr. Feb. 5, in Port, Feb. 11
OBERON	Port Arthur	U.K. or Cont.	L. Feb. 16
OCEAN	Antwerp	Philadelphia	P. Scilly, Feb. 20
OILFIELD	—	—	In Tyne, laid up
OKLAHOMA	New York	Port Arthur	L. Feb. 2
ORIFLAMME†	Cette	Philadelphia	Arr. Feb. 15
OTTAWA □	Manchester	Philadelphia	L. Feb. 24
OURAL	Batoum	Rouen	L. Feb. 23
PAUL PAIX	Zeebrugge	London	Arr. Feb. 24
PAULA	New York	Hamburg	Arr. Jan. 12, in Port, Feb. 20
PECTAN*	Manchester & Amsterdam	Newp't News	Arr. Feb. 24
PENNOIL	Tyne	Philadelphia	Arr. Feb. 16
PETROLEINE	Cette	Philadelphia	P. Tarifa, Feb. 9
PHOEBUS	Hamburg	New York	Sd. Tyne, Feb. 24
PINNA†	Yokohama	Payta	Arr. Feb. 19
POTOMAC □	Birkenhead	New York	P. Fastnet, Feb. 13
PROGRESSO ARGENTINA (Ar. bq.)	Port Arthur (Texas)	—	Sp. Feb. 5 off Fowers Rks., Flda.
PROMETHEUS	Clyde	Yokohama	At Hiogoal, Feb 24
PRUDENTIA	New York	Calais	L. Feb. 11
PURELIGHT	Hamburg	Philadelphia	P. Dunnet Head, Feb. 24
QUEVILLY (Fr. bq.)	Rouen	New York	L. Feb. 11
RENDOVA (Br. bq.)	Philadelphia	Seville	P. Del. Break. Jan. 23
RION	Philadelphia	London	P. Del. Break., Feb. 9
ROCK LIGHT†	London	Galveston	P. Lizard, Feb. 10
ROMANY*	Asmori	Singapore	Arr. Feb. & dry docked
ROTTERDAM	Amsterdam	New York	P. Prawle Pt., Feb. 20
ROUMANIAN†	Tyne	Port Arthur (Texas)	P. Prawle Pt., Feb. 22
RUSSIAN PRINCE	London	Thameshaven & Tyne	At Thameshaven, Feb. 19
SALAHADJI	Singapore	Bombay	Arr. Feb. 13
SAN CRISTOBAL	Port Arthur (Texas)	Liverpool	Arr. Feb. 12, in Port, Feb. 24
SAN IGNACIO DE LOYOLA (Sp. bq.)	Pasages	Philadelphia	L. Dec. 31
SANTA MARIA	Port Harford	Tocopilla & Tatal	L. Jan. 27
SANTA RITA	Port San Luis	San Francisco	L. Feb. 7
SARANAC □	Tyne	New York	L. Feb. 10
SAXOLEINE	Tyne	New York	P. Dunnet Head, Feb. 14
SCHUYLKILL	New York	Batavia	Arr. Jan. 17, sd. Indramay, Jan. 22
SEMINOLE □	San Domingo	New York	Arr. Feb. 12
SERVIAN†	Tyne	Port Arthur (Texas)	L. Feb. 24
SNOWFLAKE	Bergen	Tyne	Arr. Jan. 23, in Port, Feb. 23
SOYO MARU	Yokohama	Peru	L. Dec. 31
SPONDILUS*	Samboe	Europe	Sd. Sabang, Feb.
STANDARD	Havana	Philadelphia	Arr. Feb. 18
STROMBUS*	Madras	Aroe Bay	L. Feb. 15
SULTAN VAN LANGKAT	Nagasaki	Singapore	Arr. Feb. 16
SUN	Sabine Pass	Philadelphia	L. Feb. 6
SUNLIGHT (Br. bq.)	Dunkirk	Port Arthur (Texas)	?Sp. Jan. 12, 37 N. 20 W.
SURAM	Newport	Philadelphia	P. O. Hd. Kinsale, Feb. 20
SUWANEE □	Sunderland	Tyne	Arr. Jan. 10, in Port, Feb. 23
SVIET	—	—	Trading Levant and Black Sea
TAMARC □	Tyne	Philadelphia	P. Dunnet Head, Feb. 24
TELENA*	London	Philadelphia	Sp. Feb 20, 50 N. 10 W.
TEREK†	Partington	New York	L. Feb. 25
TEXAS	Avonmouth	Sabine	P. Lundy Island, Feb. 20
TIFLIS	Antwerp	Port Arthur (Texas)	L. Feb. 20
TIOGA □	New Orleans	Philadelphia	Sd. Port Eads, Feb. 15
TONAWANDA □	San Francisco	Moji	L. Jan. 27
TRINCULO	Cardiff	Port Arthur (Texas)	L. Feb. 8
TROCAS	Calcutta	—	At Singapore, prev. Feb. 17
TUSCARORA	Moji	Calcutta	L. Feb. 6
VEDRA	Yokohama	Balekpappan	L. Feb. 18
VILLE DE DIEPPE (Nor. bq.)	Philadelphia	Rouen	Arr. Feb. 18
VOLUTE	Bombay	Soesoe	L. Feb. 20
WASHINGTON	Baltimore	Kurrachee	P. Cape Henry, Feb. 11
WASHTENAW	San Pedro	San Francisco	Arr. Jan. 23
WEEHAWKEN	New York	Bouc	L. Feb. 13
WILLKOMMEN	Philadelphia	Stockholm	P. Dunnet Head, Feb 18
WINNEBAGO	—	—	Coasting U.S. and Pacific

Latest Market Intelligence.

LONDON OIL MARKET.

Supplied by Messrs. Benjamin & Gee, 31, St. Mary Axe, E.C.

Feb. 26th, 1909.

Refined Oils are unchanged as follows:—Russian, $6\frac{1}{4}$d.; American, $6\frac{7}{8}$d.; Water White, $7\frac{7}{8}$d.; Roumanian, 7d.

LUBRICATING OILS

Are quoted as follows:—

American pale, £6 10s. to £10 10s.
American dark cylinder, from £8.
American filtered cylinder, from £11 5s.
No. 1 Russian, for Spot, £8 7s. 6d.

TURPENTINE.

American Turpentine has been very dull, and there being more sellers than buyers prices have dropped considerably. Spot is now quoted 27s. 6d.; March to April, 27s. 9d.; May to June, 28s.; and July to December, 29s.

LIVERPOOL OIL MARKET.

Feb. 26th.

Refined oils are quiet, and sellers quote $6\frac{3}{4}$d., for Russian, Galician or Roumanian; and $7\frac{1}{4}$d. to $8\frac{1}{4}$d. per gallon for American.

Petroleum Spirit continues at 1s. 0d. to 1s. $1\frac{1}{2}$d. per gallon for American deodorised, according to quality on the spot.

LATEST AMERICAN PRICES.

New York, Feb. 26th.

Refined, in cases, is steady at 10·90; Standard White, 8·50; Credit balances, 1·78c.

Philadelphia, Feb. 26th.

Standard White is now quoted at 8·45.

RUSSIA. Baku, Feb. 22nd.

The Baku oil market is firm. Crude oil, spot, $21\frac{1}{4}$ copecs per pood. Residuals, $20\frac{7}{8}$ copecs. Kerosene, in ships, $27\frac{1}{2}$ copecs.

BELGIUM.

Antwerp, Feb. 22nd.

The petroleum market is firm. Price of Standard White, spot, 22 francs per 100 kilos; March, $22\frac{1}{4}$.

FRANCE. Paris, Feb. 17th.

Illuminating oil is quoted in bulk, in whole tank waggons, 25 francs per hectolitre; spirit, 33·75 francs per hectolitre. Special white oil, in barrels or cans, 33 francs per hectolitre.

GERMANY.

Hamburg, Feb. 22nd.

The kerosene market is weaker. The price of American Standard White is 7.50 marks per 50 kilos.; Galician, 7.35 marks.

HOLLAND.

Amsterdam, Feb. 20th.

The petroleum market remains firm. American Standard White, spot, 12·20 florins per 100 kilos.

ROUMANIA. Feb. 16th.

	Francs.
Crude oil from different fields, including pipe line charges, per 100 kgs.	4·50–4·70
Refined oil, exclusive of taxes, ex. refinery	8·70
Benzine, 717–720, including taxes	20·00
Benzine, 750–760	15·00–15·50
Residuals in tank waggons, at refinery	4·30– 4·35
Paraffin	120·00

Prices for Export.

Refined oil, f.o.b., per 100 kgs.	7·25–7·75
Benzine, sp. gr. 0·710–0·715, f.o.b.	17·00–18·00
„ sp. gr. 0·715–0·720 „	14·50–15·50
„ sp. gr. 0·730–0·740 „	10·00–11·00
„ sp. gr. 0·745–0.755 „	9·00–10·00

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IMPORTS of PETROLEUM into UNITED KINGDOM

Specially prepared for this Journal by the Custom House.

FOR THE WEEK ENDED 15TH FEBRUARY, 1909—

Date.	Port and Importers.	Description.	No. of Gals.	Port Whence.
Feb.	LONDON—			
9	Anglo-American Oil Co.	Lub.	29,600	Philadel.
9	"	"	38,000	New York
9	Mercantile Lighterage Co.	"	22,590	Philadel.
9	Bowring Petroleum Co.	"	10,180	"
9	British Pet. Co. (J. Brand)	Fuel	881,000	Pt. Arthur
9	London and India Docks Co.	Lub.	4,800	Hamburg
10	Thames Tug & Lighterage Co.	"	4,000	Philadel.
10	Juett and Cain	"	5,000	"
10	Lub. and Fuel Oils Co.	"	1,800	"
10	Fielder, Hickman and Co.	"	7,080	New York
10	Anglo-American Oil Co. (Narragansett)	"	268,080	"
10	" "	Lamp	2,688,020	"
10	London and India Docks Co.	Lub. Gr	200	"
10	Mercantile Lighterage Co.	Lub.	250	"
11	G. Haller and Co	"	200	Antwerp
11	Page, Son and East	"	1,240	"
11	A. Brown and Co.	"	4,800	Philadel.
12	W. H. J. Alexander	"	2,050	Trieste
12	Schlieman's Oil Co.	"	1,150	Hamburg
13	T. H. Lee	Lub. Gr.	130	"
13	London & India Docks Co.	Lub.	660	"
13	Trinidad Lake Asp. Pav. Co.	"	2,400	Philadel.
13	Mordaunt Bros.	"	5,350	"
15	Fellows, Morton & Clayton	"	5,210	"
15	Ragosine and Co	"	4,840	"
15	Union Lighterage Co.	"	8,550	"
15	Mordaunt Bros.	M. Colza	5,000	New York
15	"	Lub	2,500	"
15	Page, Son and East	Lub. Oil and Gr.	200	Antwerp
15	Wilkins, Campbell and Co.	Lub. Gr.	200	"
	LIVERPOOL—			
9	Penwarden and Jackson	Lub.	430	"
9	Langstaff, Ehrenberg & Pallate	L. Comp	130	New York
26/1	Anglo-Amer. Oil Co. (by A. R.) (Delaware)	Lamp	5,890	Philadel.
10	Meade-King, Robinson & Co.	Lub.	1,000	Hamburg
11	Pickford's, Ltd.	Lub. Oil and Paste	620	"
11	D. Currie and Co.	Lub. Gr.	200	"
12	Dee Oil Co.	Lub.	40	"
12	Buttapat Dairy Co.	"	200	Antwerp
12	Leyland Line	"	110	N. Orleans
13	W. Gibson and Sons	Lamp	2,050	Boston
13	Meade-King, Robinson & Co. (San Cristobel)	Gas	596,470	Pt. Arthur
13	"	Lub.	15,840	Baltimore
13	" (Frisia)	Borneo Dis.	235,060	Rotterdam
13	" (Harry Wadsworth)	Gas	749,860	Pt. Arthur
13	A. Hopps and Sons	M. Colza	5,560	Baltimore
13	"	Lub.	2,785	"
Feb.	BARROW—			
9	Anglo-American Oil Co. (Cadillac)	Lamp	387,700	New York
9	" "	Benzine	755,580	"
9	Asiatic Petroleum Co. (Aug. Kessler)	Mot. Spirit	1,378,900	Pulo Samboe
6	" "	Benzine	346,900	"
	BRISTOL—			
9	J. Hare and Co.	Lamp	2,050	New York
9	"	Lub.	80	"
9	H. Pritchard and Co.	Lamp	2,100	"
9	Anglo-Bosphorus Oil Co.	"	1,250	"
11	H. R. James and Son	Lub.	18,920	"
11	"	M. Colza	6,000	"
12	J. and R. Bush	Lub.	12,000	"
12	"	Lamp	6,000	"
12	Pickfords	Lub.	400	Hamburg
12	H. Pritchard and Co.	"	630	"
13	E. Stock and Sons	"	400	"
13	"	L. Paste	80	"
	CARDIFF—			
13	Homelight Oil Co. (Paul Paix)	Lamp	264,000	Batoum
	HULL—			
9	T. Meredith, Roberts and Co.	Lub.	500	Antwerp
9	Wilsons and N.E. Co.	"	4,660	"
9	T. Wilson, Sons and Co.	"	107,040	New York
11	Wilsons and N.E. Co.	"	1,000	Antwerp
12	W. Gilyott and Co.	"	30,800	New York
	MANCHESTER—			
9	Bramwell, Fern and Co.	"	2,880	Hamburg
9	Lamport and Holt	"	1,600	New York
9	Liverpool Storage Co.	"	13,080	"
9	Bramwell, Fern and Co.	"	1,230	"
9	G. B. Taylor	"	114,080	"
10	Schofield and Co.	"	420	"
10	J. T. Fletcher and Co.	"	120	Antwerp
	NEWCASTLE—			
9	Tyne-Tees S.S. Co.	"	3,280	"
9	"	"	600	Hamburg
	PLYMOUTH—			
9	T. Nicholson and Co.	"	180	"
	SOUTHAMPTON—			
11	P. E. Curry	"	1,950	New York
	GLASGOW—			
9	Clyde Shipping Co.	Lub. Gr.	80	Antwerp
11	Donaldson Bros.	Lub.	600	Baltimore
13	J. and P. Hutchinson	"	100	Rouen
	GRANGEMOUTH—			
9	W. Graham-Yooll and Co.	Lamp	4,000	Hamburg
10	J. Currie and Co.	Lub.	1,240	"
11	"	"	4,200	"
11	W. Graham-Yooll and Co.	Lamp	4,000	"

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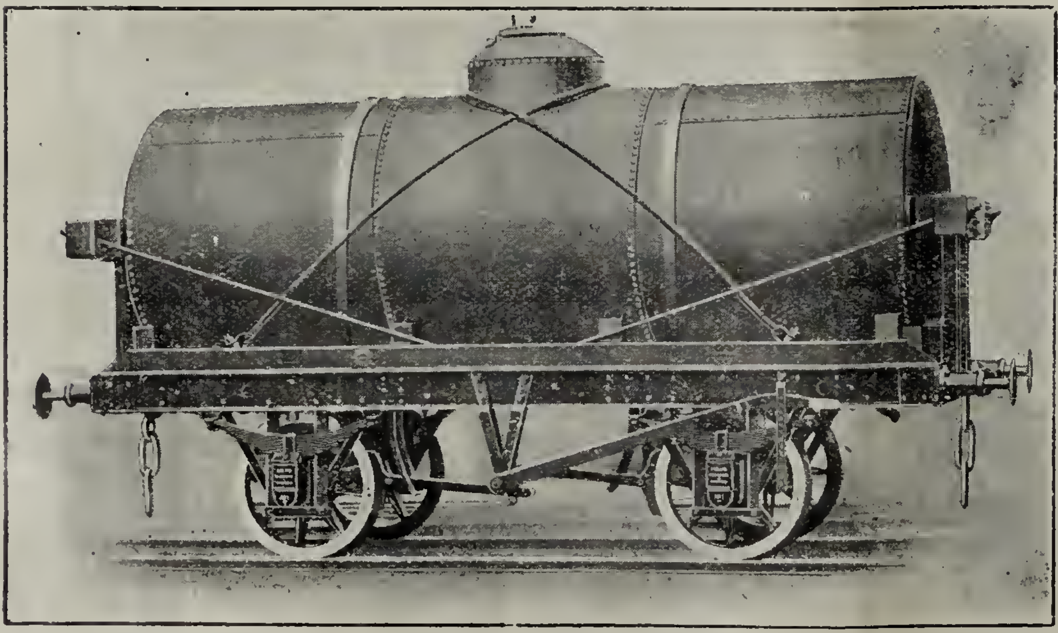

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IMPORTS.—(*Concluded*).

Date.	Port and Importer.	Description.	No. of Galls.	Port Whence.
Feb.	LEITH—			
9	J. Currie and Co.	Lub.	360	Bremen
11	W. Graham-Yooll and Co.	Lamp	4,100	Hamburg
15	,,	,,	3,620	,,
15	J. Currie and Co.	Lub.	460	,,
15	G. Gibson and Co.	,,	80	Antwerp
11	,,	,,	120	,,
	BELFAST—			
13	Anglo-American Oil Co. (Cadillac)	Lamp	653,120	New York
	DUBLIN—(by qy.)			
2/1	Palgrave, Murphy and Co.	,,	18,840	,,
			9,782,650	
	Deduct to Correct—			
	LIVERPOOL—			
15/1	Anglo-American Oil Co. (Aug. Korff)	Lub.	105,150	Philadel.
	HULL—			
1/2	Thos. Wilson, Sons and Co.	,,	41,800	New York
	Total for the Week		9,635,700	

FOR THE WEEK ENDED 22ND FEBRUARY, 1909—

Date.	Port and Importers	Description.	No. of Galls.	Port Whence.
Feb.	LONDON—			
16	Wilkins, Campbell and Co.	Lub. Gr.	240	Antwerp
16	London and India Docks Co.	Lub.	760	Hamburg
17	Lubricating & Fuel Oils, Ld.	,,	2,460	Philadel.
17	Mordaunt Bros.	,,	7,100	New York
17	W. B. Dick and Co.	,,	21,630	,,
17	Asiatic Petroleum Co.	Spt. Illum.	5,000	Rotterdam
17	London and India Docks Co.	Lub.	240	Antwerp
18	J. Harrison	Lub. Gr.	330	,,
18	Page, Son and East	Lub. Oil and Gr.	160	,,
18	H. P. Wheatley and Co. (Paul Paix)	Lamp	528,200	Batoum
18	,, ,,	Lub.	62,500	,,
18	Scott's Wharf	,,	3,000	New York
18	Anglo-American Oil Co.	,,	46,800	,,
19	Mercantile Lighterage Co.	,,	16,600	,,
19	Simpson, Spence and Co.	,,	4,500	Philadel.
19	W. H. J. Alexander	,,	2,670	,,
19	British Pet. Co. (Caucasian)	Lamp	824,000	Kustendje
19	,, ,,	Gas	919,000	,,
19	A. Brown and Co.	Lub.	2,000	Hamburg
19	British and Foreign Wharf	,,	560	Antwerp
20	London and India Dock Co.	,,	450	,,
20	,,	,,	3,240	Hamburg
20	T. H. Lee	Lub.Gr.	90	,,
20	Scott's Wharf	Lub.	3,000	New York
20	Meade-King, Robinson & Co. (Aureole)	Gas	874,250	Pt. Arthur
20	Anglo-American Oil Co.	Lub.	70,400	Philadel.
22	Lubricating & Fuel Oils, Ld.	,,	15,000	Hamburg
22	,,	,,	5,740	Philacel.
22	Page, Son and East	Lub. Oil and Gr.	440	Antwerp
22	British Petroleum Co.	Lamp	1,700	Kustendje
22	E. Clark	Lub.	1,090	Philadel.
22	A. Brown and Co.	,,	4,800	,,
	LIVERPOOL—			
16	D. Currie and Co.	L.Paste	260	Hamburg
16	J. T. Fletcher and Co.	Lub.	340	Antwerp
16	Bancroft and Co.	,,	250	,,
16	Meade-King, Robinson & Co.	,,	5,200	Baltimore
16	W. B. Dick and Co.	,,	10,580	,,
17	Pickfords	Lub. Oil and Paste	590	Hamburg
18	H. Parry	Lub.	120	,,
18	R. Crooke, Jun.	Lub.Cream	280	New York
18	Ismay, Imrie and Co.	Lub.	240	,,
19	G. B. Taylor	,,	680	,,
19	Jas. Light and Sons	,,	2,000	,,
19	Vacuum Oil Co,	,,	21,880	,,
20	Stockdale and Doel	,,	6,970	Boston
22	Liverpool Storage Co.	Lub. Gr.	28,400	New York
22	,,	Lub.	35,400	,,
22	,,	M.Colza	10,120	,,
22	D. Owen and Son	Lub.	1,130	,,
22	R. Crooks and Co.	Lub.Cream	260	,,
22	Geo. B. Taylor	Lub.	200	,,
22	Pitt and Scott	,,	40	,,
22	Shropshire Union Rail. Co.	,,	4,340	,,
22	Valvoline Oil Co.	,,	820	,,
22	D. Owen and Sons	,,	2,520	,,
22	Ismay, Imrie and Co.	Lub Gr.	40	,,
22	Bowring Petroleum Co.	Lub.	6,010	Philadel.
22	Worthington and Boler	Lub. Gr.	2,520	,,
22	,,	M.Colza	1,000	,,
22	,,	Lub.	6,200	,,
22	J. T. Fletcher and Co.	Lub.Gr.	120	Antwerp
22	C. W. Field	Lub.	420	,,
22	C. C. Wakefield	L.Comp	770	,,
22	Penwarden and Jackson	Lub.	400	,,
	BRISTOL—			
16	Pickford's	Lub. Oil and Gr.	620	Antwerp
18	H. Matthews and Co.	Lub.	310	Hamburg
18	British Pet. Co.	,,	600	Antwerp
18	Anglo-Amer. Oil Co. (Texas)	Lamp	1,754,420	Sabine
	CARDIFF—			
22	Bristol Steam Nav. Co.	Lub.	600	Antwerp
16	(By qy.) J. Arnott and Sons	L.Resid.	8,100	Trieste
	GOOLE—			
18	Goole Steamship Co.	Lub.	80	Hamburg
	GRIMSBY—			
18	J. Sutcliffe and Son	,,	490	Antwerp
19	,,	,,	250	,,
	HARWICH—			
11	D. Howard	,,	660	,,
	HULL—			
16	T. Wilson, Sons and Co.	,,	5,600	Reval
16	Wilsons and N E. Co.	,,	2,640	Hamburg
16	,,	,,	2,960	Antwerp
10	(By qy.) British Pet. Co. (Margaretha)	Refined for manufacturing	749,000	Constantza
18	W. Gilyott and Co.	Lub.	4,000	Reval
18	G. Hardy and Co.	,,	260	Antwerp
18	T. Wilson, Sons and Co.	,,	6,560	Riga
18	Wilsons and N.E. Co.	,,	440	Antwerp
19	,,	,,	2,000	Hamburg
22	,,	,,	3,440	Antwerp
22	T. Wilson Sons and Co.	,,	124,400	New York
	MANCHESTER—			
16	Wilson, Son and Co.	,,	320	Rotterdam
16	Meade-King, Robinson & Co. (Bloomfield)	Gas	1,453,230	Pt. Arthur
16	,, ,,	Lub.	1,200	,,
16	J. T. Fletcher and Co.	,,	650	Antwerp
17	,,	,,	80	,,
18	Pickford's, Ltd.	L.Paste	130	Hamburg
19	W. Hodgson and Co.	Lub.Gr.	1,090	New York
19	Bramwell, Fern and Co.	Lub.	1.160	,,
19	George B. Taylor	,,	77,240	,,
22	Manchester Liners, Ltd.	,,	7,600	Philadel.
22	Anglo-American Oil Co. (Ottawa)	Gas	275,930	,,
22	,, ,,	Fuel	128,280	,,
22	Liverpool Storage Co.	Lub.	10,200	New York
22	Diamond Lubricating Co.	,,	4,500	,,
	MIDDLESBRO'—			
18	E. Harris and Co.	,,	2,240	Antwerp
	NEWCASTLE—			
17	Tyne-Tees Steamship Co.	,,	3,000	,,
	NEWPORT—			
17	Jones, Heard and Co.	,,	6,160	New York
17	,,	M.Colza	2,000	,,
	PLYMOUTH—			
17	Anglo-American Oil Co. (Ottawa)	Resid.Gas	827,790	Philadel.
19	Bristol Steam Nav. Co.	Lub.	460	Antwerp
	SOUTHAMPTON—			
18	White Star Line	,,	1,200	New York
	SWANSEA—			
16	Burgess and Co.	L.Paste	130	Hamburg
	ABERDEEN—			
17	R. C. Reid and Co.	Lamp	4,000	,,
	DUNDEE—			
18	D. Alexander and Sons	,,	250	,,
	GLASGOW—			
16	Clyde Shipping Co.	Lub.	120	Antwerp
16	Anchor Line	,,	48,860	New York
16	,,	M.Colza	3,600	,,
16	,,	Lub.	19,480	,,
16	J. and A. Allan	M.Colza	3,500	Philadel.
16	,,	Lub.	58,850	,,
	GRANGEMOUTH—			
16	J. Currie and Co.	L.Paste	240	Hamburg
16	W. Graham-Yooll and Co.	Lamp	3,880	,,
18	J. Currie and Co,	Lub	1,440	,,
18	,,	L.Paste	180	,,
22	W. Graham-Yooll and Co.	Lamp	4,000	,,
	LEITH—			
18	J. Currie and Co.	Lub.	400	,,
18	Geo. Gibson and Co.	,,	160	Antwerp
19	Henderson and McIntosh	,,	15,160	Philadel.
22	J. Currie and Co.	,,	2,560	Hamburg
	Deduct to correct—		9,216,650	
	LONDON—			
2/2	Produce Brokers' Co.	Lub.	800	Antwerp
8/2	H. Finckler and Co.	L.Resid.	130,400	Trieste
	LIVERPOOL—			
4/2	Meade-King, Robinson & Co.	Spirit	850	Rotterdam
	HULL—			
9/2	T. Wilson, Sons and Co.	Lub.	30,800	,,
	Total for Week		9,053,800	
	Total for the Fortnight		18,689,500	

The Petroleum Review.

By PAUL DVORKOVITZ.

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THE PETROLEUM REVIEW:

The ANNUAL SUBSCRIPTION for both English and Foreign readers is 26s., including Postage. Single Copies may be had at the offices at 1s.

The Editor would esteem it a favour if readers, when communicating with the various firms advertising in our pages, would mention the "Review."

Contributions upon items of interest are always welcomed from subscribers, but in each case these should be accompanied with the name and address of the sender, not necessarily for publication.

Editorial Notes.

Roumania and her Export Trade.

Following upon the statistical article, which we published in our last issue, dealing with the operations in the Roumanian fields during 1908, we now reproduce upon another page a summary of the lengthy article appearing in the latest issue of the *Moniteur du Petrole Roumain* relating to Roumania's petroleum export trade. That the country's export trade is steadily increasing, both in its volume and its national importance, is apparent from the figures published in this issue. A careful examination of those figures reveals several changes which are taking place in the marketing of Roumanian oils. For instance, England is rapidly approaching the position maintained by France as the country which is the largest consumer of Roumanian oils. But with this difference, that whilst England imports large quantities of Roumanian heavy oils, France takes very little, and last year, for example, England took 44,000 tons of this class of oil, as against 2,000 tons imported into France, but on the other hand, France took 65,000 tons of benzine, or more than one-half of Roumania's total benzine exports, as against the 20,000 tons taken by England. Roumania's exports to Germany continue to be a disappointing feature, since notwithstanding the preponderating influence which German capital has in the Roumanian petroleum industry, its exports are diminishing, the decline during 1908 as compared with that of 1907 being quite 30 per cent.

The Standard Oil Company's Profits.

According to its policy, adopted at the time Federal and State suits were started against the company, and since continued, a quarterly dividend of $15 has recently been paid by the Standard Oil Co., making a disbursement for the quarter of approximately $15,000,000, a return of nearly 15 per cent. on its issued capitalisation of $98,335,382. The profits for the quarter are estimated to be close to $20,000,000, leaving a surplus of about $5,000,000. The general depressed condition of oil business during 1908 had but little effect on the earning capacity of the company, for its profits totalled nearly $80,000,000, of which $39,335,320 was disbursed in dividends, leaving a surplus of $40,664,680. For several years the company has been earning at the rate of $80,000,000 to $85,000,000 annually, the high record being in 1907, when the total earnings amounted to the latter sum. Since 1902 the company's profits total $553,202,074, from which dividends of $294,258,980 were paid, leaving as a surplus $238,943,094, a return equivalent to 543 per cent. on the issued capitalisation. This exceedingly prosperous state, however, has only been attained by the expenditure of very large sums of money and frequently at a time when matters might easily have drifted the wrong way. It has therefore been only by the exercise of remarkable foresight that a result has been achieved which finds no parallel in the whole oil industry.

American January Petroleum Exports.

The year 1909 has started very favourably for the American petroleum export trade, and the statistics for the first month of the year, shewing as they do a considerable advance upon those for January, 1908, suggest that the foreign trade in American petroleum products will during the present year again establish a new record, both for quantity and value. As reported by the Chief of the Bureau of Statistics, the January exports of petroleum from the United States amounted to 120,536,355 gallons, and were valued at $7,906,717, and when compared with the figures for the corresponding month of 1908 shew an increase of over 15,400,000 gallons, and $275,000 in value. The exports for the month were distributed as follows:—Crude, 13,043,008 gallons; naphtha, 6,001,809 gallons; illuminating oils, 82,937,688 gallons; lubricating oil and paraffin, 10,006,952 gallons; residuum, 8,457,198 gallons. The total mineral oils shipped from New York was 53,757,747 gallons; Philadelphia, 35,304,618 gallons; Baltimore, 486,440 gallons; Sabine, 19,313,252 gallons; Boston, 34,815 gallons; Galveston, 3,442 gallons; and San Francisco, 11,636,041 gallons.

Are we to have Galician Crude Oil?

Of late, the Continental press has been giving much publicity to reports respecting an English group of capitalists who are said to be negotiating for the purchase from the Union of Galician Crude Oil Producers of 100,000 to 200,000 tons of Galician crude oil, from which the benzine has been eliminated. The proposal appears to have been subsequently modified so as to apply to ordinary crude oil. We have recently heard a great deal of the same subject and, if we are not mistaken, the parties have been endeavouring to interest people in England in the proposal. We doubt very much, however, whether any reliable firms with any experience in the oil trade would identify themselves with such a scheme, for the difficulties in the way are almost insurmountable, while the ultimate success is extremely doubtful. To begin with, the only practicable route for such export would be *via*

Germany, and the Galician Crude Oil Union could not possibly get together sufficient tank waggons to transport the oil. Shipment from Trieste is also out of the question on account of cost. The handling of the oil in England is also bound up with serious difficulties. Crude oil containing benzine is of course as inflammable as benzine itself and therefore is subject to the same restrictions in storage, etc. On the other hand, should the crude oil be rendered safe by the elimination of its most valuable component part, the benzine, its value for refining purposes would be greatly reduced. There are many who, we are sure, will anxiously watch the developments in regard to this Galician proposal.

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PRODUCTION OF ENGLISH COMPANIES IN RUSSIA.

Baku Russian Petroleum Co., Ltd.—The production for the week ended 27th February was 160,380 poods, or 2,685 tons; and for the week ended 6th March was 168,200 poods, or 2,711 tons.

Russian Petroleum and Liquid Fuel Co., Ltd.—The production for the week ended 27th February was 209,000 poods, or 3,370 tons; and for the week ended 6th March was 204,000 poods, or 3,289 tons.

Spies Petroleum Co., Ltd.—The production for the week ended 28th February was 334,685 poods, or 5,398 tons. The total production for year to 28th February was 1,649,345 poods, or about 26,602 tons. The total production for the corresponding period last year was 1,409,700 poods, or 22,737 tons. The output for the week ended 7th March was 306,805 poods, or 4,948 tons. The total production for year to 7th March (66 days) was 1,956,150 poods, or 31,550 tons. The total production for the corresponding period last year (67 days) was 1,801,615 poods, or 29,058 tons.

The European Petroleum Co., Ltd.—The production for the week ended 28th February was 147,599 poods, or 2,380 tons; and for the week ended 7th March was 134,765 poods, or 2,173 tons.

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TRIAL TRIP OF THE S.S. "CONCH."

This vessel which was built by Messrs. Swan, Hunter and Wigham Richardson, Wallsend-on-Tyne, to the order of Messrs. The Anglo-Saxon Petroleum Co., Ltd., Billiter Street, E.C., was taken on her trial trip on the 3rd inst., and obtained a speed of nearly 11½ knots. This vessel is built for the petroleum trade, especially with a view to carrying various kinds of oil in one cargo. She has the highest class at Lloyds, and has been superintended by Messrs. Flannery, Baggalley and Johnson, of London, Liverpool and Rotterdam. Her dimensions are 412 feet overall by 51 feet 3 inches breadth by 31 feet moulded depth, and she carries a cargo of 7,750 tons on a light draft. The engines are supplied by Messrs. Wallsend Slipway and Engineering Co., Ltd., of Newcastle-on-Tyne, and have cylinders 26½ inches, 43 inches and 72 inches diameter with a stroke of 48 inches, steam being supplied by three large single-ended boilers. The vessel has pump rooms and is fitted fully with electric light and winch gear for quick and efficiently handling the vessel.

LONDON OIL SHARE MARKET.

Friday, March 12th, 1909.

The improvement and interest we have lately commented upon in the Oil Share Section of the London Stock Exchange has increased since our last issue, and the leading shares have been marked by considerable activity.

Shell Transport Ordinary keep strong at about highest figure, viz., 54s. 6d. to 55s. 6d., thus registering an advance of 3s. per share.

Burmah Oil Ordinary, though not quite maintaining best prices, are firm at $5\frac{7}{16}$-$5\frac{9}{16}$, which is an advance of ¼ on balance.

Lobitos Oil are a very firm market at top price of 27s. to 28s., having thus risen 1s. 9d. per share and Pacific Oilfields have received a good deal of attention, also maintaining best price of 25s. 3d., 26s. 3d., that being 2s. 9d. above those of a fortnight ago.

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THE OIL TANKER S.S. "MINA BREA."

A FEW SNAPSHOTS AT THE LAUNCH.

Photo by) Before the Launch. (Capt. W. Davies.

Photo by) Gracefully Taking the Water. (Capt. W. Davies.

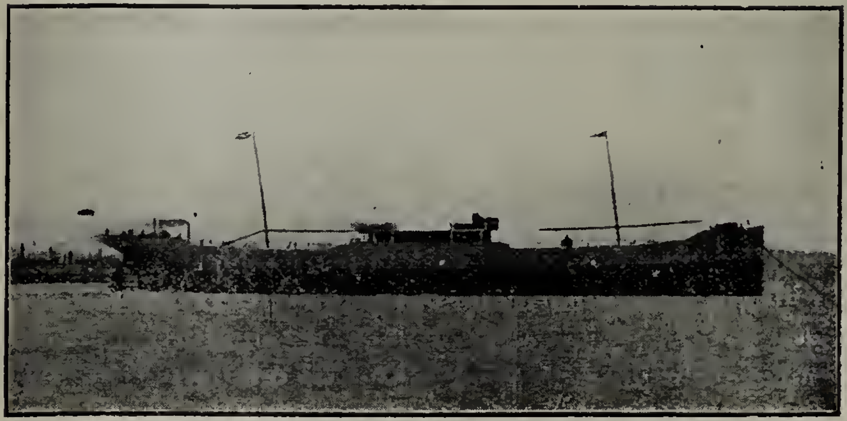


Photo by) The "Mina Brea" in Mid River. (Jones, Greenock.

Launch of the Oil Tanker S.S. "Mina Brea" at Greenock.

. . BY OUR OWN REPRESENTATIVE. . .

> Build her straight, O worthy master,
> Staunch and strong, a goodly vessel,
> That shall laugh at all disaster,
> And with wave and whirlwind wrestle.
>
> —Longfellow.

On Wednesday afternoon another oil tanker was added to the long list of bulk oil carrying vessels constructed by the Greenock and Grangemouth Dockyard Co., Ltd., when from their Greenock yards the "Mina Brea" was successfully launched in the presence of a large company of guests. The tank steamer has been constructed to the order of Mr. W. Keswick, M.P., of the London and Pacific Petroleum Co., Ltd., having been placed through Messrs. Lane and Macandrew, to whose specification it was constructed. The dimensions of the vessel are:—Length over all, 376 feet; breadth, 49 feet; depth, 29 feet; and she will carry 6,600 tons on a shallow draft.

The new tanker has in all 24 oil tight compartments. She has been built to the highest class at Lloyds, though her scantlines are much in excess of those required by that society to enable her to withstand the stormy weather she will frequently encounter in her journeys from the Peruvian coast to the Far East.

The "Mina Brea" is fitted with cellular double bottom under machinery and boilers, these, like in all oil tankers built by the Greenock and Grangemouth Dockyard Co., being placed amidships. Pump rooms are fitted both at the fore and aft end of the bridge, each containing a powerful set of pumps, capable of delivering from either side of the vessel. The accommodation for the officers and engineers is fitted amidships, and is upon a scale not frequently met with in oil tankers, no pains nor money having been spared to make those on board as comfortable as possible. The vessel throughout is fitted with electric light.

The Launch of the "Mina Brea."

Before describing the launching ceremony, it may be mentioned here that it is only six months since the order for the tanker was placed in the hands of the builders, and barely five and a-half months since the construction of the vessel was commenced. It will thus be seen that the builders have established quite a record for rapid ship construction, especially when the bad weather for the past two or three months is taken into account. It is of interest to add that the whole of the oil tanks were tested in the short space of 29 days, and in no single case was it found necessary to refill the tanks.

The engines, which are to be supplied by Messrs. J. G. Kincaid and Co., Ltd., Greenock, are to be of 2,500 horse-power, the cylinders being 25½ inches, 42 inches, and 69 inches in diameter, with a stroke of 48 inches. The vessel will have a complete installation for the burning of liquid fuel on the Meyer's system. During her construction, the vessel has been superintended by Mr. Given, on behalf of Messrs. Flannery, Baggallay and Johnson, and also by Captain Davies, on behalf of Messrs. Lane and Macandrew.

Among those present at the launch were Mr. W. Millar (managing director of the Greenock and Grangemouth Dockyard Co., Ltd.), Mr. W. Keswick, M.P., and Mrs. Keswick, Mr. William Millar, Junr., Mr. T. Harvey (Director of the Greenock and Grangemouth Dockyard Co., Ltd.), Mrs. and the Misses Millar, Mrs. A. Crawford (Glasgow), Miss Currie, Mr. and Mrs. Given, Mr. and Mrs. A. Beeby Thompson, Captain Davies (Messrs. Lane and Macandrew), Mr. Kincaid (Messrs. Kincaid and Co.), Mr. D. MacDougal (Lloyd's Registry) and Provost Denholm.

The ceremony of naming the vessel was gracefully performed by Mrs. Keswick, and as the "Mina Brea" took the water the guests gave her a hearty send-off. It was a pretty scene as the tanker left the ways. As though to wish it God-speed, the sun momentarily lit up the picture, whose centrepiece was the "Mina Brea," and whose background great snow-covered hills, while fading away in the distance, where earth and sky seemed to meet, was the snowy outline of Ben Lomond.

The launching party then adjourned, at the invitation of Mr. W. Millar, the managing director of the Greenock and Grangemouth Dockyard Co., Ltd., to one of the company's offices, which had been specially set apart for the occasion. Here Mr. Millar asked the company to drink to the success of the vessel they had just seen so gracefully take the water. He was sure they all hoped that it would be a profitable ship to the owner, and pay large dividends, for that was the main object of the ship being built. He coupled with the toast the name of Mr. W. Keswick, M.P., who had specially journeyed from London to be present at that little ceremony. He also desired to propose the health of Mrs. Keswick, and to thank her for the way in which she had performed the ceremony of naming the new tanker. It was to his mind a good augury that they had been that afternoon favoured with the sun at the launch, for Greenock was generally associated with snow. As a memento of that occasion, he desired that Mrs. Keswick should accept a small present, and he hoped that every time she looked at it, her mind would be carried back to the christening of the "Mina Brea."

Mr. Millar then handed over the presentation which consisted of an exquisitely chased silver jewel casket bearing the inscription, "S.S. 'Mina Brea,' launched 10th March, 1909."

Mrs. Keswick expressed the pleasure it had given her to perform the ceremony of naming the new vessel, and thanked Mr. Millar for the kind gift, which she assured him would always be treasured by her.

Mr. Keswick, in replying, said that it had been a great pleasure to him to be present that day, and witness the quite pretty sight of the "Mina Brea" taking the water, as well as to have inspected the yard in which she had been built. He had a feeling of satisfaction that they had got in that most excellent vessel the best possible workmanship, and consequently a vessel which would stand all the stormy weather which was the inevitable fate of all boats which ploughed the ocean and travelled to distant parts. He was assured that in that vessel they had, so far as skilful workmanship and splendid draughtmanship were concerned, all that was requisite to make up a good steamer, and that being the case, there ought to be before the "Mina Brea" a period of prosperity, and, he trusted, long existence, as well as of great satisfaction to those interested in her. He desired to thank the company for the kind way in which they had received his name, coupled as it was to that of the success of the "Mina Brea," and he had great pleasure in asking the guests to drink to the health and success of the builders of that vessel—the Greenock and Grangemouth Dockyard Co., Ltd.—coupling with the toast the name of the company's managing director, Mr. Millar. The yards in which they were assembled that day formed one of those great works of which the country had every reason to be proud—a country which was renowned for the good work it turned out, and for the splendid naval achievements in the way of construction which had always marked the progress of shipbuilding.

The toast, which was enthusiastically honoured, was responded to by Mr. Millar. He thanked the company for the way in which they had received the toast of success to his company. Ever since the company started business, it had been their endeavour to produce the best article possible, and he was certain that if one followed the career of the vessels which had been built at their yards, it would be seen that they had been very successful. The boat launched that day was a special type of vessel—a type which the firm had more or less tried to cultivate for the past sixteen years. In 1893 they built their first two oil tankers, and the oil tanks passed the water test without even refilling, while in the "Mina Brea" he was pleased to say its 24 tanks had all been tested and passed by the gentlemen who had examined them on behalf of the classification society, and they had expressed themselves that they had never met in any vessel anything to excel the class of workmanship which they had in the "Mina Brea"—a high class of workmanship which they paid for, which they desired, and which they had a right to expect. They all knew that if an oil vessel were not carefully attended to in its early stages there was trouble ahead, but in the vessel they had just launched everything possible had been done to make her worthy of her builders, and a credit to her owner, and he trusted she would be a ship capable of earning large dividends. He believed there were large dividends paid in connection with the oil transport business, but he was sorry that the same could not be said of all tramp owners. The oil trade, he knew, had had its ups and downs, yet it was much better off than many other trades.

Mr. Millar concluded by expressing the hope that it would not be long before the owner of the "Mina Brea" decided to have a sister ship, and in that case he trusted that the Greenock and Grangemouth Dockyard Co. would be the builders. He then proposed the toast of success to the town and trade of Greenock, coupling with it the name of Greenock's chief magistrate—Provost Denholm.

In his reply, Provost Denholm said that so far as they were concerned in Greenock he did not think they had much to fear so long as they had captains of industry among them like Mr. Millar, who was able to keep his yards full when other yards were empty. They all congratulated him upon the success which had attended the launch that day, and if the way in which the "Mina Brea" took the water was an indication of the way in which she would perform her duties, he thought her owners would feel justly proud of her. He hoped that Mr. Keswick would be so pleased with the vessel that he would decide to again visit Greenock with a repeat order.

Mr. Millar then proposed the health of the builders of the ship's engines, Messrs. Kincaid and Co., and in reply thereto Mr. Kincaid said that though he was not a prophet nor the son of a prophet, yet if the "Mina Brea" ran as well on oil fuel as she ran that day on soft soap, they would all have cause to be pleased with the result of their labours. That would be the first vessel which his firm had engined for the burning of oil fuel, yet he could assure the company that whatever was done, would be well done, and of the ultimate success he had no doubt. The "Mina Brea" was indeed a wonderful vessel, and he congratulated its owners upon the possession of her.

The toast of the firm of Messrs. Flannery, Baggallay and Johnson (under whose supervision the vessel was constructed) was then honoured, and in replying on behalf of the firm, Mr. Given said he had every reason to believe that the "Mina Brea" would go through her trials quite as satisfactorily as, if not better than, the other oil tankers launched from the same yard. A great amount of time had been required to bring the boat to her present state of perfection, and he thought great praise should be given to Messrs. Lane and Macandrew, who had been largely responsible for her. Therefore he asked the company to give to that firm any credit due for the successful vessel they had just launched.

Mr. Millar then asked the company to drink to the success of the firm of Messrs. Lane and Macandrew, coupling with the toast the name of Captain W. Davies. The builders had received very great assistance from that firm, and more particularly from Captain Davies, and it was mainly owing to that assistance that the vessel had been constructed so rapidly.

Captain Davies thanked the company for the enthusiastic way in which the toast had been received. There was no doubt about it that the "Mina Brea" was as good a ship as he had ever seen, and great credit was due to everybody concerned.

After several other toasts had been honoured, Mr. Keswick proposed the health of Capt. Evans, who was to take charge of the "Mina Brea." In doing so, he said that Capt. Evans had had considerable experience in the management of oil steamers, and he was sure he was the right man in the right place. He was a man of good qualities, and the speaker felt certain that the "Mina Brea" under the charge of Capt. Evans would confirm the good opinions expressed by those who had witnessed the launch that day.

Cheers were then given for the "Mina Brea," its builders, and the owners, and the company separated after having taken part in a most interesting launch ceremony.

THE ENGLISH HOME OF PETROLEUM CAN MACHINERY.

A Visit to Messrs. J. Rhodes and Sons' Works at Wakefield.

BY OUR SPECIAL COMMISSIONER.

It has frequently been said that our English manufacturing firms are lamentably slow to take advantage of opportunities as they occur, and that as a consequence many of them drop behind in the spirited race of competition with the enterprising Continental firms. To some extent this is, we admit, true; yet there are exceptions, and it is of one of these exceptions that we desire to speak in this article.

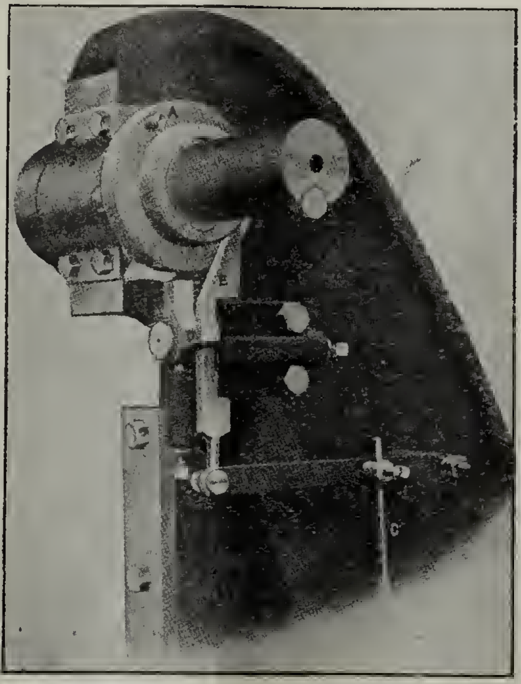
It was the privilege of the writer the other day to visit the extensive works of Messrs. J. Rhodes and Sons, Ltd., at Wakefield—the English home of petroleum can machinery—and an inspection of the various departments in that busy hive of industry impressed upon one's mind the fact that there are at least some go-ahead firms in this country who have grudged neither time nor money in order that they might be in a position to occupy the front rank in that comparatively small army of English manufacturing concerns who still maintain their own against all comers.

Erecting Bay No. 1 at the Grove Iron Works.

The firm of Messrs. J. Rhodes and Sons is not one of mushroom growth, for right back at the beginning of the last century it was established upon part of its present site by Mr. Joseph Rhodes, J.P. To be exact, it was in 1824 that the firm was founded, founded in quite a humble way by the grandfather of the present directors, who recognised the scope that then existed for machinery for the making of tinmans' goods. The whole staff consisted of a handful of men, and the sole plant in the Grove Ironworks was a few hand operated machines. Eighty years ago we did not possess the same up-to-date system of transportation as we have to-day, and the founder of the Grove Ironworks frequently trudged by road to such remote places as Manchester in order to secure a market for his goods.

From that time until the present day, the history of the Grove Iron Works has been one long story of expansion and progress, and to-day in the place of three or four workmen who were sufficient eighty years ago to deal with the incoming orders, we now find a staff of several hundred employés permanently engaged in the making of the well-known "Rhodes" machines, used not only very largely for the making of petroleum cans, but for rapidly and cheaply manufacturing all classes of tin and sheet ironware, pieced, stamped or pressed.

As the business grew, the active management of the concern fell upon the founders two sons—Mr. George and Mr. William Rhodes—and it was during their *regime* that the firm specially laid itself out for the making of all kinds of petroleum can machinery. Twenty years ago, it will be recollected, the transport of petroleum products underwent a most drastic change. The old methods of using barrels were almost entirely discarded, and in their place an enormous industry grew up in the petroleum can trade, and this necessitated the introduction of efficient machinery for the purpose of turning out completed cans expeditiously and economically. Messrs. Rhodes immediately turned their attention to perfecting machines for use in the petroleum canning trades, and as evidence of the success which they achieved in this direction, we have the fact that to-day, in almost every part of the world, "Rhodes" petroleum can machinery has earned an enviable name for itself.



Messrs. Rhodes and Sons' Patent Clutch Arrangement.

It was in 1901 that the partnership between Messrs. George and William Rhodes was dissolved, and upon the decease of Mr. William Rhodes, the present directors of the firm—Mr. Charles J. and Mr. William Rhodes, his sons—assumed control, having previously worked in almost every department of the Grove Iron Works. The first important step taken by the young men was to carry out several important extensions to the works, for these were badly needed, the ever-increasing trade having rendered the several enlargements of the original building quite unsuitable. The old works were, therefore, almost entirely demolished, and upon the same site, though taking in a considerably larger area, new and thoroughly modern works were erected. Great care was exercised in the design of the new works to see that real improvements were introduced in the way of obviating unnecessary transport of material considerable distances from one department to another. Thus the new works consist of seven homogeneous bays, each of which forms a separate department, but there are also in addition a number of minor workshops, stores buildings, etc., as well as most spacious offices. Here it is that Messrs. Rhodes' miniature army of employés, numbering several hundred, find regular employment.

All the various departments of the works are equipped with the most modern plant, while electric travelling cranes run from end to end of the bays, so that the transport of the heavy castings, etc., which go to make up the completed machines, shall be accomplished in a minimum of time. The illustrations published upon the opposite page give a good idea of the size of the numerous "shops" at the Grove works, and they tend also to shew how thoroughly equipped are Messrs. Rhodes for the manufacture of that class of machinery which has long ago made their name famous all the world over.

As will be seen from the photographs, considerable ingenuity has been brought to bear in regard to the arrangements in the whole of the fitting, machine and erecting shops, all of which receive a most plentiful supply of light. In view of the most delicate character of the work which takes place in these shops, two essential points have always to be borne in mind—not only must the workers be men skilled in mechanics but, in order to creditably carry out their work, they must have as much light as possible, and in both these matters Messrs. Rhodes are singularly fortunate.

Messrs. Rhodes have always made their own castings for the numerous machines with which their name is associated, the reason being that it is most necessary that the materials used shall be those which give the greatest possible resistance. One can easily understand that if ordinary metal were used in machines which have day after day to stand such a strain, the repair bill would soon run to considerable proportions, and it is to obviate this, that the firm take such care to ensure the whole of their castings being able to withstand the greatest resistance. So much importance do they attach—and quite naturally so—to this point, that they guarantee their castings to exert a greater ton pressure than any other make in the world of similar weight.

But our readers, we are aware, are mainly interested in those machines which play so prominent a part in the manufacture of petroleum cans, consequently we will concentrate our remarks upon this branch of the firm's business. In passing, however, we would say a word or two upon the petroleum can. During the past ten years it has undergone many changes, both in its mode of manufacture and its size. It may be taken for granted, however, that the can which is universally recognised is that containing contents of approximately 1,125 cubical inches—this being the five gallon petroleum can. For a considerable time the single seamed can, as shewn in Fig. 1 upon page 160, was the only one in use, but rough usage shewed that some change in the method of affixing the tops and bottoms was essential, if a can was intended to survive for any considerable time. As can be seen from the sketch here given, this type of petroleum can depended entirely upon the solder for its strength.

PHOTOGRAPHS OF THE VARIOUS DEPARTMENTS IN THE WORKS OF MESSRS. RHODES AND SONS.

(SPECIALLY TAKEN FOR THE "REVIEW.")

THE DIE DEPARTMENT.

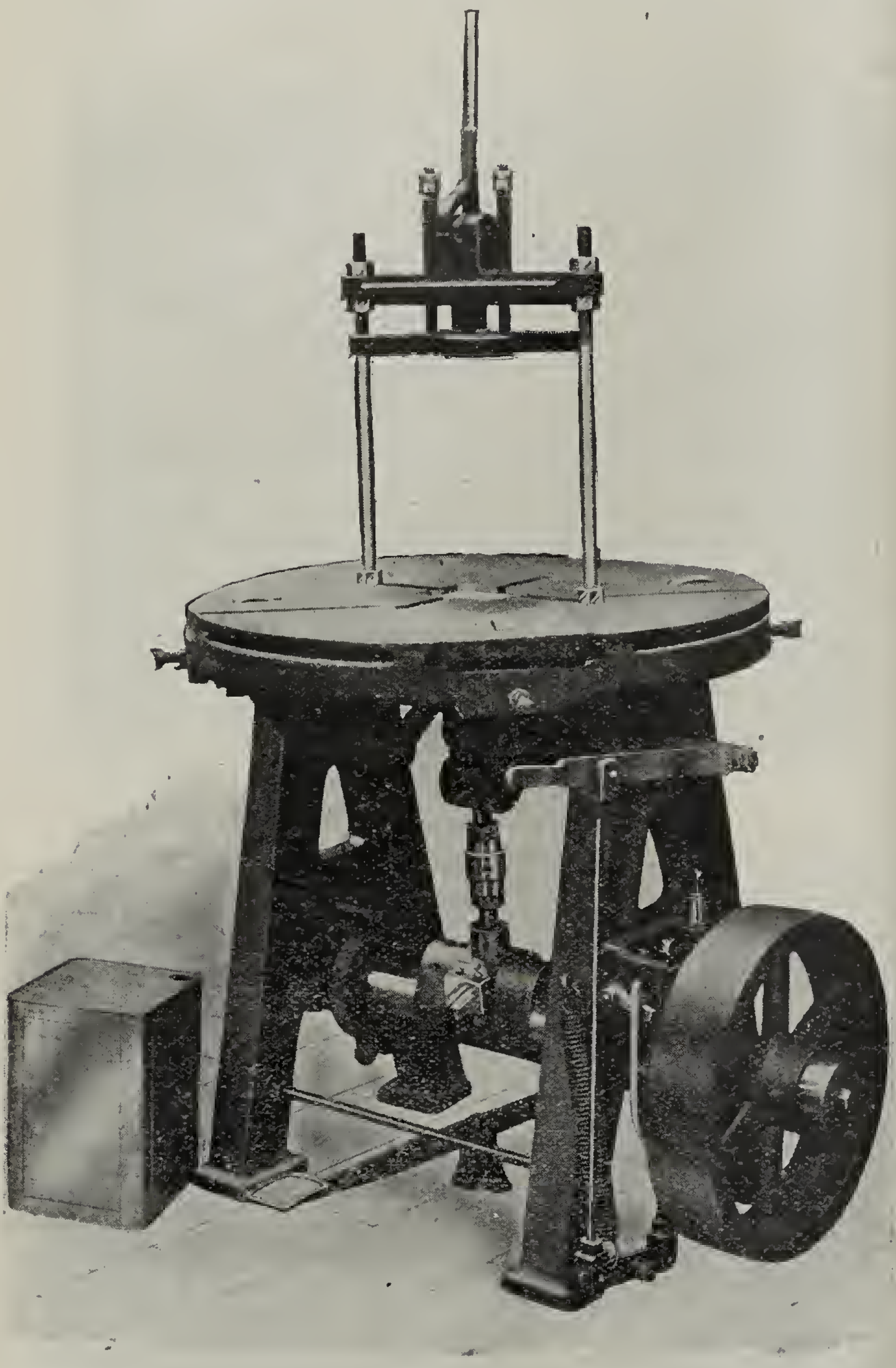
ERECTING BAY, No. 2.

ERECTING BAY, No. 3.

ERECTING BAY, No. 4.

ERECTING BAY, No. 5.

FOUNDRY—MAIN BAY.



Rhodes' Patent Double Seaming Machine.

Then Messrs. Rhodes introduced an improved kind of seam known as the "double lock," Fig. 3, and so popular has this become that other styles have to a very large extent ceased to be in demand. Shortly afterwards came the hemmed edge can shewn in Fig. 2, but though this proved to be slightly more rigid than the single-seamed can, it possessed the same great fault, for it depended entirely upon the solder for its strength. The third sketch clearly shews the reason for the great popularity of the double-seamed can. It is, of course, considerably stronger than the single seamed or hemmed edge can, and requires no more solder, whilst a cheaper quality of solder is used, and by Messrs. Rhodes' patent machinery it can be made from the same sized sheets as the hemmed edge can, and at the less cost in labour, while, above all, there is an entire absence of delicate dies or machinery in its manufacture. Just as the writer was passing through one of the departments, one of the firm's instantaneous double seaming machines was being tested before shipment, and the rapid and most perfect manner in which, by a single push of the foot, the bottom was double seamed to the sides of the can was just cause for wonderment. An illustration of this remarkable machine appears on the left. The machine is of extremely simple construction, and possesses the great advantage of not contorting the can in the slightest. This is the machine which has been and still is in great demand for the manufacture of the rectangular petrol cans, with which everybody is so familiar.

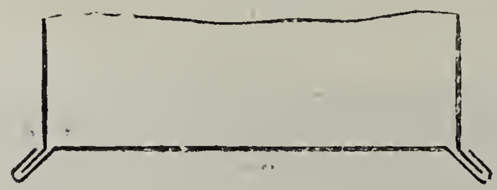


Fig. 1.

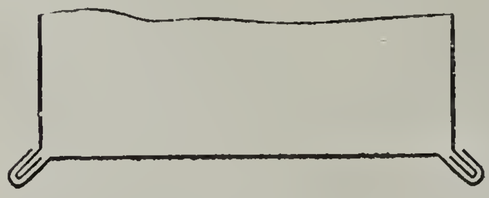


Fig. 2.

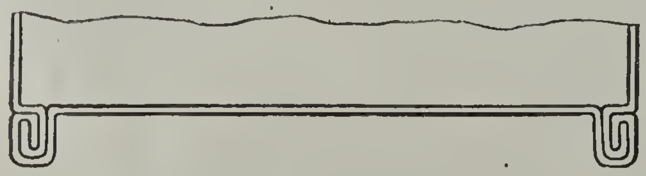
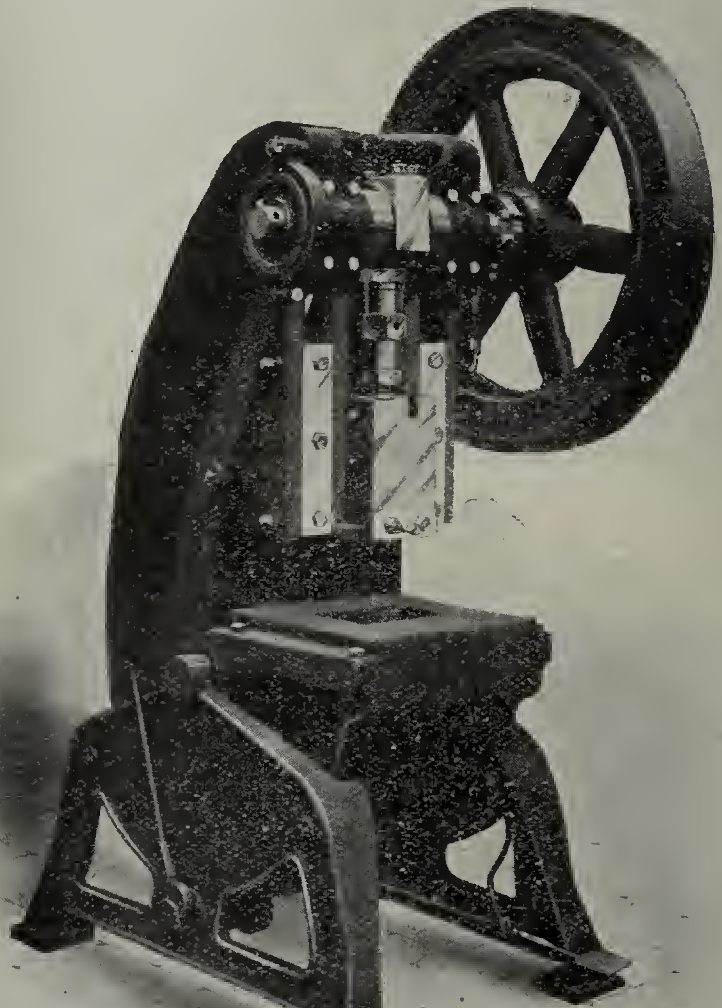


Fig. 3.

Another press to which the writer's attention was directed was the firm's inclinable power press, which can be worked, as its name suggests, in either an upright or an inclined position, and it is used for the cutting and stamping, in one operation, the tops and bottoms of petroleum cans. Like all the other presses manufactured at the Grove Iron Works, this is fitted with the Rhodes' patent safety clutch, an illustration of which appears in the centre of page 158. This ingenious clutch is extremely simple in its operation, and is, by-the-bye, the only clutch recommended and in many cases enforced by H.M. factory inspectors. Needless to say, so efficacious has it proved in its work that it has many imitators, but the same effect has only been arrived at by a complicated multiplication of parts.

To attempt in the limited space at our disposal to give anything like a lengthy description of the hundred and one presses manufactured by the firm would of course be impossible. We can only hope that what we have already said may impress our readers in all parts of the world with the fact that the progress of Messrs. Rhodes and Sons has been due to the general high state of perfection attained in all their machines, many of which are so closely associated with the petroleum canning industry.



The Firm's Inclinable Power Press.

AMERICAN NOTES.

Glenn Pool Statistics.—The estimated daily production of the Glenn Pool during January is placed at about 51,000 barrels. There are at present 1,600 producing wells in the district, which covers an area of 8,500 acres.

Brief Facts.—There are about 80,000 producing oil wells in the United States, and these are valued at $150,000,000. No less than 45,000 men are employed upon the oil producing properties, while an additional 19,000 men find regular employment in the oil refineries.

A Record Gas Well for California.—The Associated Oil Co. can claim the credit of bringing in the largest gas well so far struck in the oil fields of the State. The well, which is situated a few miles from the Los Angeles, is almost 2,000 feet deep, having been bored to nearly that depth by a rotary drill This gas well is close to a gushing oil well which is 2,800 feet deep.

Phenomenal Rains in California.—California has just been experiencing phenomenal storms of wind and rain, and in the oil fields all work has been for the time suspended. Roads have been flooded, and the movement of all material has been almost out of the question. With a return to calmer conditions development work is now proceeding again, but the effects of the recent storms will remain for many weeks yet.

Death of Mr. Alfred L. Snell.—We deeply regret to announce the decease of Mr. Alfred L. Snell, the editor of our well-informed contemporary, the *Oil City Derrick*. Many of our American subscribers will be conversant with Mr. Snell's work, and to them, as well as to ourselves and the whole of the petroleum industry, the most sincere regret will be felt at the taking away of one who has done so much for the American petroleum industry.

A Shut-down Probable.—It is quite probable that there will shortly be a general shut-down in the Mid-Continental fields, so that production may be considerably curtailed. The matter has been actively taken up by the Mid-Continent Oil and Gas Producers' Association, who state that in reply to enquires which they have sent out to the various producers, fully 95 per cent. are in favour of a general shut-down with a view to bringing about better conditions for all concerned.

ENGLISH PATENTS.

(Specially contributed by Messrs. EDWARD EVANS & Co., Consulting Engineers, Chartered Patent Agents, and Enrolled Patent Attorneys, of the United States, of 27, Chancery Lane, London, W.C.

Applications Filed in Great Britain.

Rotary Internal Combustion Engine for Gas, Oil, Petrol and the like.—Percival Ellis Walmsley, 2, Fair Street, Morris Green, Bolton. No. 3088 of 1909.

Improvements relating to Inlet and Exhaust Valves in connection with Petrol and Oil Motors and the like.—Baron V. Barreto, 18, Fulham Place, Paddington, London. No. 3116 of 1909.

Apparatus for Lighting Motor Cars and other Vehicles with Petrol Gas.—William Simpson Gillie and Alexander Gavin Whitelaw, 5, York Place, Edinburgh. No. 3354 of 1909.

Improvements in Petroleum and like Burners.—Henry Coke Powel, 72, Bro ley Road, Catford, London. No. 2970 of 1909.

Applications Published in Great Britain.

Process and Apparatus for Deodorising the Products of Combustion of Oil Burning Stoves.—B. Dornig and Arthur Zobisch. No. 13124 of 1908.

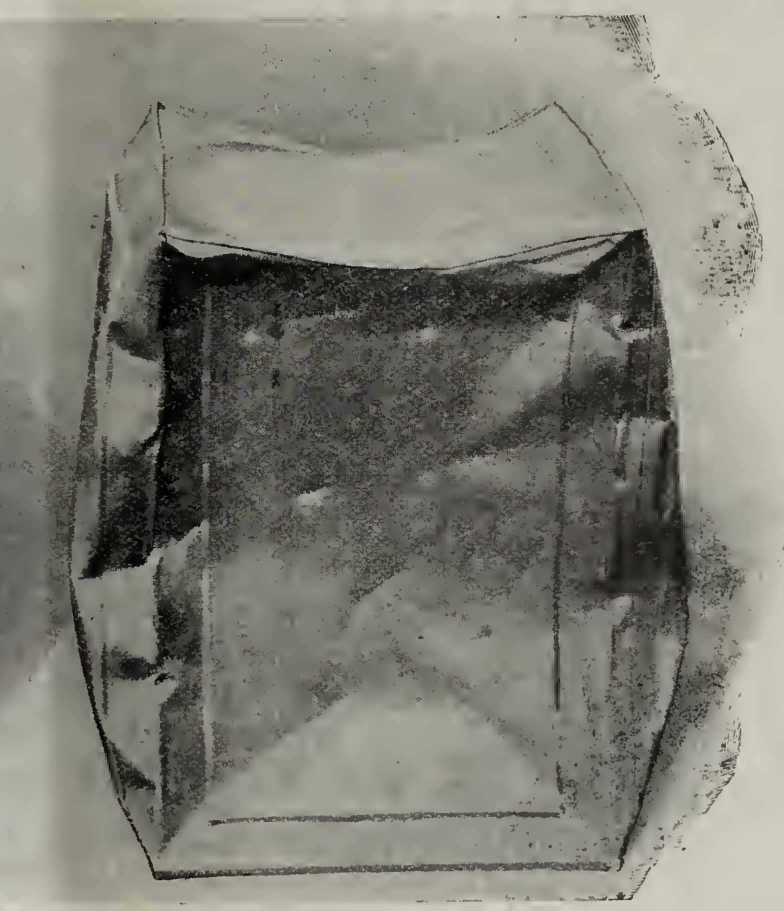
This relates to a process of deodorising the products of combustion of oil stoves consisting in passing the hot gases before the latter reach the outer atmosphere, through a vapour collector and pipe to a coil charged with water or diluted solution of alkali or alkaline earth, and cooling said coil by water in a tank enclosing same.

Process for Extinguishing Fire from Burning Benzine, Petroleum, Oil of Turpentine and the like.—W. E. Evaus. No. 17156 of 1908.

This has reference to a process for the extinguishing of fires from burning benzine, kerosene oil, petroleum, oil of turpentine, mineral oils, vegeteble oils, animal fats and the like, and consists in applying bromine or iodine upon the seat of fire either alone or dissolved in chlorine substituted by hydrocarbons or in bi-sulphide of carbon, for the purpose of cutting off the access of atmospheric air from the seats of fire by creating upon them a layer of gases of high specific gravity.

CAN-MAKING PLANT.

American "Hemmed-edge" Can, showing how easily the end can be forced off.



"Rhodes" "Double-seamed" Can, after being heavily hammered the ends are just as firmly attached.

DOUBLE SEAMED CANS, as made by "Rhodes" Patent Machinery, are produced at **same or less cost** in every respect as the "Hemmed-edge" Can.

Sole Makers— **J. RHODES & SONS, Ltd.,** Grove Iron Works, WAKEFIELD, ENG.

PETROLEUM IMPORTS INTO THE UNITED KINGDOM DURING FEBRUARY.

THE SHIPMENTS INTO VARIOUS PORTS.

The total imports of petroleum products into the various ports of the United Kingdom for February are published in the following table. The amount to 32,874,820 gallons, as against 31,960,400 gallons for January. The figures are as under, in gallons:—

Port.	Illuminating.	Lubricating.	Residuals.	Gas Oil. (Solar.)	Benzine.	Fuel Oil.	Other Descriptions.
Aberdeen	10,000	110	—	—	—	—	—
Barrow...	387,700	—	—	—	2,448,170	—	—
Belfast	653,120	130	—	—	—	—	—
Bristol	1,789,820	86,920	10,880	—	—	—	20,000
Cardiff	264,000	600	8,100	—	—	—	—
Dundee	490	4,280	—	—	—	—	—
Glasgow	—	233,460	2,400	—	—	—	9,350
Gloucester	—	1,200	—	—	—	—	—
Goole	—	80	—	—	—	—	—
Grangemouth	16,880	8,260	—	—	—	345,800	—
Grimsby	—	1,770	—	—	—	—	—
Hartlepool	—	280	—	—	—	—	—
Harwich	—	920	—	—	—	—	—
Hull	749,000	447,980	—	—	—	—	3,600
Leith	31,400	26,760	—	—	—	—	—
Liverpool	4,850	480,980	—	1,346,330	276,210	—	25,050
London	9,479,350	1,121,890	14,000	2,137,200	5,028,130	881,000	5,000
Manchester	1,277,980	500,360	—	1,729,160	—	128,280	12,770
Middlesboro'	—	2,240	—	—	—	—	—
Newcastle	—	13,640	—	—	—	—	—
Newport	—	10,560	—	—	—	—	2,000
Plymouth	—	890	—	827,790	—	—	—
Southampton	—	5,430	—	—	—	—	—
Swansea	—	370	—	—	—	—	—
Totals	14,664,590	2,949,110	35,380	6,040,480	7,752,510	1,355,080	77,770

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And 18, Exchange Street, MANCHESTER,

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Scottish Widows Bldgs., Baldwin St., BRISTOL; 202, High St., HULL.

Importers and Distributors of PETROLEUM PRODUCTS.

SPECIALITIES.

Gas Oil, Liquid Fuel, Mineral Lubricating Oil of every description, Cylinder Oil of all Kinds. Paraffin Scale and Wax, Mineral Jelly.

Benzine from 700 to 780 s.g. Petroleum Spirit specially distilled to specification. High Test Spirit for blending with and replacing Turpentine.

Swansdown, Snowflake, Mayflower, Shamrock & White Light Petroleum.

Hydrolene and all kinds of Petroleum Pitch.

RUSSIAN NOTES.

Mr. Arshak Goukassow has been elected chairman of the council of the Baku Petroleum Association, in place of Mr. A. M. Feigl, who has retired.

An Important Concession.—The Russian Minister of Finance has granted permission for Russian illuminating oil to be exported to Mongolia through the Kiachta customs with remission of excise duty

The Russ Petroleum Co., operating at Baku, in its fifth financial year (1907) reduced its losses to 3,944 roubles. The nominal capital of the company is 600,000 roubles. There are debtors for 50,135 roubles and creditors for 7,670 roubles.

A State Owned Industry.—The quantity of crude oil produced at Baku in 1908, on lands held from the Government against royalties, amounted to 203,924,722 poods, which is about 40 per cent. of the total production at Baku.

Bebe-Aibat Fire.—On the 2nd of March a great fire broke out in the Bebe-Aibat field, and destroyed five derricks and a crude oil ambare on the Zoubaloff property, one derrick of the Caspian and Black Sea Society, two derricks of the Schibaieff Petroleum Co., Ltd., and two derricks of the Votan Co. Incendiarism is suspected, and two Mahomedan villagers have been arrested.

Liquid Fuel Contracts.—The Moscow-Kursk-Nijni Railway has given out by tender the following contracts for liquid fuel for delivery at Nijni-Novgorod :—To Nobel Bros. for 9,300,000 poods at 33½ copecs, delivery during the next twelve months, and to Mr. G. S. Dembot for 1,200,000 poods at 31·6 copecs, for delivery ex barges during the navigation.

Natural Gas *v.* Crude Oil.—The Minister of Commerce and Industry, upon the recommendation of the Scientific Committee of the Mining Department, has fixed the relative heating value of natural hydrocarbon gas and crude as being 1 : 700, *i.e.*, 700 cubic feet of gas at a pressure of one atmosphere is equal to one pood of crude oil, without taking into account the correction for temperature.

Survival of the Fittest.—It is reported from Czaritzin that the Volga-Caspian Co. is about to be wound up. This company once occupied an important position in the Volga oil trade, but lately, like many another firm, it found it increasingly hard to withstand the competition of the united forces of the Nobel and Mazout Companies. The property of the Volga-Caspian Co. has now been taken by the Mazout Co. for debt.

Novorossisk Shipments.—During the first 11 months of 1908 the following quantities of petroleum products were shipped from Novorossisk :—Refined kerosene, 1,133,813 poods; crud oil, 114,643 poods; residuals, 1,304,388 poods; benzine, 2,099,535 poods; ligroin, 136,656 poods; and goodron, 23,711 poods. The benzine was all shipped to foreign markets, whilst the residuals were all destined for the home market. Of the refined kerosene about 70 per cent. went to the home ports, and 30 per cent. was exported.

ROUMANIAN NOTES.

The Gallia Company has resumed drilling of its well No. 3 at Diteshti, the work on which was some time ago suspended at 400 metres. At present a depth of 425 metres has been attained.

Prospecting at Filipeshti.—The Concordia Co. is about to start sinking three prospecting hand dug wells on the property of Mr. Charles Mitileneo at Filipeshti-Diteshti, and in May will start drilling the boreholes required under the terms of the concession.

Petroleum Exports.—The exports of petroleum products from Roumania continue very brisk in spite of the fact that the season is not practically at end. Special activity seems to be displayed in the exports of illuminating oil and gas oil to the English market, which are steadily growing.

Position at Gura-Ocnitza.—The International Co. has at present at Gura-Ocnitza a total of twenty boreholes, of which nine are productive, four are in drilling, whilst on the rest work has been suspended. The last well to strike oil was No. 9 at a depth of 327 metres. The yield of this well is 25 to 30 tons daily, which represents nearly half of the company's total output.

Progress at Bordeni.—At Bordeni the Colombia Co. struck an oil stratum in its well No. 268 at a depth of 265 metres. The yield not being considered sufficient the well is being further deepened, and it is expected that the first paying oil stratum will be reached ere long. Well No. 1 of the Romano-American Co., in the same locality, continues to yield between 15 and 20 tons daily.

A Good Market.—The crude oil market in Roumania remains firm, and prices unchanged. There is very little crude oil available for spot sales, and transactions are therefore scarce. The production in January shews a decline due to the falling off in the output of the Moreni field, nor can any substantial improvement be expected in February. The very considerable amount of development work now in progress at the field is, however, bound to bring about an increased production in the near future.

The Aurora Tangle.—The *Moniteur du Petrole Roumain* is informed that, owing to fresh difficulties which have arisen, negotiations between the several parties interested in the Aurora Co. with a view to its reorganisation, have again been broken off. For the present everybody seems convinced that an agreement is impossible, but in view of the many changes through which this matter has already gone, the possibility is not entirely precluded of some unforeseen circumstance arising which may lead to a resumption of negotiations.

Security of Oil Concessions.—The Committee entrusted by the Ministry of Domains with the drafting of the modified law for the consolidation of petroleum concessions has now completed its task and submitted the draft law to the Minister of Domains. A copy of the draft law has also been submitted to the Petroleum Association, who will consider it in detail at the next meeting and express its views on it. The Committee consists of Messrs. Vintila Bratianu, C. Alimanestianu, E. G. Danielopol, Manolescu-Ramniceanu and V. Pushcariu.

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LATEST QUOTATIONS OF PETROLEUM SHARES.

ENGLISH COMPANIES.

This list is restricted to companies who have paid dividends or who are producers.

Company.	Capital Paid Up.	Value of Shares.	Latest Prices.
Assam Oil	£205,000	£1	17/6-18/6
Baku Russian Petroleum .	£750,000 Ord.	£1	0/3-0/9
,, ,, ..	£650,000 $5\frac{1}{2}$% Pref.	£1	1/6-2/6
Bibi-Eybat Petroleum Co. ..			5/6-6/6
Californian Oilfields	£385,000 Ord.	£1	$5\frac{1}{4}$-$5\frac{1}{2}$
Commonwealth Oil Co. Pref	fully paid (Prem.)		$\frac{1}{2}$-$\frac{5}{8}$
,, ,, Def..	£1 fully paid		$\frac{1}{2}$-$\frac{5}{8}$
European Petroleum.. ..	£550,000 Pref.	£1	0/3-0/9
,, ,, ...	£550,000 Ord.	£1	0/$1\frac{1}{2}$-0/$7\frac{1}{2}$
,, ,, ...	£376,000 Deb.	£100	66-70
Russian Pet. & Liquid Fuel ..	£500,000 $6\frac{1}{2}$% Pref.	£1	2/6-3/6
,, ,, ...	£600,000 Ord.	£1	2/0-3/6
Schibaieff Petroleum ..	£575,000 6% Pref.	£5	$\frac{3}{16}$-$\frac{5}{16}$
,, ,, ...	£575,000 Or l.	£1	0/3-0/9
Shell Transport & Trading ..	£2,000,000	£1	54/6-55/6
,, ,, ,, ..	£1,000,000 Pr f.	£10	$10\frac{7}{8}$-11
Spies Petroleum Company ..	£387,500	10s.	11/0 11/6

RUSSIAN COMPANIES.

Company.	Nom. Value in Roubles	Quotations on March 8th.	
		Lowest Roubles.	Highest Roubles.
Baku Naphtha Co.	100	317	320
,, ,, ,, (issue of 1908) fully pd.	100	$284\frac{1}{2}$	—
Balakhany Naphtha Co.	250	—	—
Caspian Society	1,000	3,800	3,825
Mazout Co.	250	—	—
Melikoff, A. C.	250	—	—
Mirzoeff Bros.	250	—	—
Naftalan Co.	250	—	—
Naphtha Co. "Kavkas"	250	—	—
Naphtha Trading Co., A. I. Mantacheff & Co.	250	127	128
Neft Co.	250	—	—
Nobel Bros.	5,000	10,300	10,350
,, ,, ...	250	512	514
Rops and Co. V...	250	—	—
Russian Naphtha Co.	250	—	—
Society Mazout	250	—	—
Ter-Akopoff Co.	250	—	—
Tumaieff & Co., J. G.	250	—	—
Volga-Caspian Naphtha and Trading Co	250	—	—
,, ,, ,, (Second Issue)	250	—	—

SCOTCH COMPANIES

Supplied by Messrs. MACLEAN AND HENDERSON, STIRLING.

Company.	Capital Paid Up.	Value of Share	Latest Prices.
Broxburn Oil Co.,Ltd.,Ord. 17/- pd	£235,000	£1	£2 4s. 0d.
Do. 6% Cum. Pref. ..	£100,000	£10	£12 15s. 0d.
Burmah Oil, Ord.	£1,100,000	£1	£5 10s. 6d.
Do. Pref.	£250,000	£1	£1 8s. 0d.
Dalmeny Oil Co., Ord. (7 paid) ..	£37,800	£8 10s	£5 0s. 0d.
Do. 5% Pref. ..	£18,900	£7	£4 12s. 0d.
Lobitos Oilfields, Ltd. (£1).. ..	£275,000	£1	£1 7s. 3d.
Oakbank Oil Co., Ltd., Ord.	£170,000	£1	£1 18s. $10\frac{1}{2}$d
Do. Pref. (fully paid)	£36,980	£1	£1 4s. 9d.
Do. Do. (10s. paid)	£63,020	£1	£1 3s. 0d.
Pacific Oilfields, Ltd. (£1)	£200,000	£1	£1 6s. 0d.
Pumpherston Min. Oil Co., Ld., Ord. (17s. paid)	£110,500	17s.	£12 0s. 0d.
Do. 6% Cum. Pref.	£100,000	£10	£14 0s. 0d.
Tarbrax Oil Co., Ltd. Ord. (£1 pd.)	£38,350	£1	£2 19s. 6d.
Do. 6% Cum. Pref.	£35,000	£1	£1 5s. 0d.
Young's Paraffin Co., Ltd., Ord. ..	£452,808	£4	£3 14s. 9d.
Do. "B" Deb...	£150,000	£100	£176 0s.

DUTCH COMPANIES.

Company.	Latest Quotations (per cent.)	Florins
Arnhemsche Petroleum Mij.	34	1,000
Aurora ,, ,, (Deb. 5%)	—	—
Campina Poiana Mij.	—	—
Dordtsche Petroleum Mij. (Ord.)	148	—
,, ,, ,, (Pref.)	165	50
,, ,, ,, (Deb. $4\frac{1}{2}$%)	$102\frac{1}{4}$	1,000
Gaboes ,, ,, ...	—	—
Holl. Rumeensche Petroleum Mij.	70	1,000
Int. Rum. Pet. Mij.	20	500
Java Petroleum Mij. (Ord.)	$11\frac{1}{2}$	1,000
,, ,, ,, (Pref.)	$38\frac{1}{2}$	—
Koninklyke Nederl. Pet. Mij. Shares	406	100
,, ,, Share certificates	—	1,000
Mœara Enim Petroleum Mij.	$174\frac{1}{4}$	100
,, ,, 1-1,000 Oblig. 5	—	250-1,000
"Moesi Ilir" Petroleum Mij.	—	—
Nederl.-Rumeensche Petroleum Mij.	$4\frac{3}{8}$	—
Nieuwe Ned. Petroleum Mij. And.	—	1,000
Oklahoma Petroleum Co.	116	—
Oliebronnen in Hannover Mij. (Deb.) ..	$54\frac{1}{2}$	—
Panolan Maatschappij Cert.	230	—
Perlak Petrol. Mij. (6% cum. pr. A.)	$140\frac{3}{8}$	1,000
,, ,, (Common)	—	—
Sumatra-Palembang Petroleum Mij	$149\frac{3}{4}$	500
Tarakan Petrol Mij.	$29\frac{1}{4}$	—
Zuid Perlak Petrol. Mij. (Pref.)	$136\frac{1}{4}$	—

J. F. FARWIG & Co.,

Established 1809.

MOTOR SPIRIT.

These cans are specially made for the safe carriage of Petrol, and have been tested and passed at the Railway Clearing House. Guaranteed tested up to 5 lbs. per square inch.

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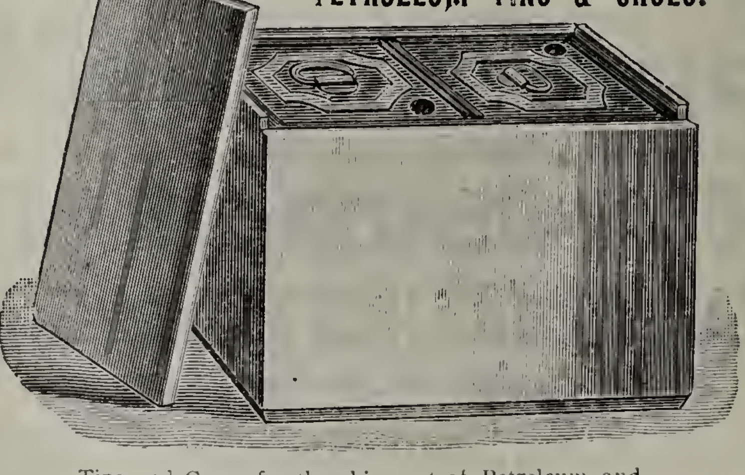
EXPORT PACKING CASE MAKERS;

PETROLEUM TINS & CASES.



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AND THE
RUSSIAN PETROLEUM INDUSTRY.

A Practical Handbook on the Exploration, Exploitation, and Management of Russian Oil Properties. . . . .

Including Notes on the Origin of Petroleum in Russia, and a Description of the Theory and Practice of Liquid Fuel.

By A. BEEBY THOMPSON, A.M.I.Mech.E.
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Saturday, March 13, 1909.

A PLEA FOR JUSTICE.

We have so many instances placed on record of how the petroleum industry in various parts of the world has been most unjustly assailed, and its best interests threatened from several quarters, that it almost becomes commonplace to hear of new attempts being made to strangle some of those branches of trade associated with the oil industry. Abroad we are face to face with the fact that in some producing countries the governments seem bent, though possibly quite unintentionally, of doing a great and permanent harm to the interests of oil, and at home we have our own Home Office busying itself in regard to one very important branch of our oil trade, for it has gone so far as to have a Special Committee appointed to consider the question of the storage, use and conveyance of petroleum spirit.

Personally, we have to admit that the time is ripe for the sitting of such a committee to hear evidence, and upon this to decide whether many of the drastic regulations at present enforced with regard to the storage and conveyance of petroleum spirit cannot now be relaxed in favour of others which will render the extension of this important branch of the oil trade the more easy, and relieve those engaged therein from many of the pains and penalties which at the present time surround them.

One can quite understand the natural desire on the part of those in power to err rather on the side of making regulations too drastic when dealing with a young trade, but now that the importation, distribution and use of motor spirit has passed far from its infancy and become an integral part of our country's trade, it is, of course, imperative that a re-modelling of the regulations should take place.

But the policy of the recently-appointed Committee appears to us to be directed toward assisting by all in its power to strangle the growing industry, and thus strike a blow not only at the oil trade, but also at the motor industry. We publish upon another page of this issue an official report of the evidence given so far before that Committee, and a perusal of this will, we are confident, be highly amusing to those who know the trade, as shewing the light in which our Departmental officials view the subject. The evidence given by both Captain Dessborough and Mr. J. O'Donnell may be all right in its way, but for the life of us we cannot understand the value of such bald statements as those made by the two witnesses. Captain Dessborough referred to the absence of powers enabling railway and canal companies to make bye-laws respecting motor spirit, and seeing that he made a point of this, it will be knowledge to him to know that the bye-laws enforced by our railway and canal companies at present affecting motor spirit are sufficiently arbitrary even to very seriously jeopardise the transport trade of motor spirit in this country.

Then Mr. O'Donnell appears to have gone quite out of his way to refer to a large number of accidents that have occurred through petroleum spirit in recent years, and in view of this, urging an amendment of the law. It would be interesting to have had a detailed statement upon this matter, inasmuch as we are strongly of the opinion that accidents through the use of motor spirit are surprisingly few, and the law in this regard calls for less stringency, if anything. To suggest additional regulations in regard to the storage and use of spirit seems to us to be little less than absurd, and quite beside the point.

We know that the tendency is to create fresh Government appointments, and it is probable that the motor spirit trade is looked to as a channel to find profitable employment for a few Government supervisors; in fact, the first witness rather made this suggestion. But surely the motor spirit trade requires no such grandmotherly legislation or supervision.

If any alteration of the existing regulations is essential, and we feel certain they could do with much modification, then no one knows the requirements better than those members of the oil trade who, day after day, are engaged in the storage and distribution of motor spirit. Let the Committee take the evidence of the chiefs of our distributing oil companies, for each company to-day has a petroleum spirit branch, and frame their recommendations accordingly. They will then have done a work which will be appreciated by the whole of the oil trade and the members of the motor fraternity at large, but to attempt to arrive at a decision by hearing witnesses such as we have already referred to, is to say the least, little short of ludicrous. The motor spirit trade has come to stay, and therefore it is only reasonable to expect that it shall be governed by regulations, framed upon the evidence of those who understand of what they speak—regulations which shall neither cripple nor destroy, but which shall allow expansion and full liberty, while not creating unnecessary danger to life or property.

THE TIN PLATE MARKET.

Messrs. Norton, Owen & Co., of 4, Bishopsgate Street Within, London, E.C., report under date March 11th, 1909, as follows:—

General business is quiet, but the demand for oil sizes is well sustained, and a considerable amount of business has been transacted, but prices remain practically unchanged as below. This is somewhat surprising, as considerable alarm prevails as to the possibility of a general strike in the South Wales coal field in the summer. Should a strike not be averted, a serious stoppage of operations in the tin plate trade would of course ensue. At foot we give particulars of the exports of tin plates for the first two months of this year.

IC	18¾ × 14	124 sheets	110 lbs.	11/10½ per box.
IC	19¼ × 14	120 ,,	110 ,,	11/10½ ,,
IC	20 × 10	225 ,,	156 ,,	16/10½ ,,

F.o.b. Wales. Tin lining and iron hooping extra.

EXPORTS OF TIN PLATES.

	Month ended February.			Two months ended February.		
TO	1907. Tons.	1908. Tons.	1909. Tons.	1907. Tons.	1908 Tons.	1909. Tons.
Russia	732	701	1,321	1,556	1,616	2,151
Germany ..	3,319	2,513	1,828	6,982	4,269	4,170
Netherlands ..	2,376	2,071	2,152	5,652	3,690	4,252
Belgium	363	412	481	1,283	1,540	1,496
France ..	2,668	2,323	1,761	4,260	4,454	3,009
Portugal	921	321	231	1,519	1,418	1,062
U.S. of America	5,392	5,018	5,152	11,292	9,721	8,655
British E. Indies	3,940	4,223	5,458	8,994	8,502	8,790
Australia ..	547	1,855	1,558	2,620	4,177	3,533
Canada	1,579	1,128	2,867	3,804	2,615	6,758
Other Countries..	9,683	9,059	9,712	20,430	20,646	20,243
Total Tons ..	31,520	29,624	32,221	68,392	62,648	64,119
	£	£	£	£	£	£
Total Values..	442,094	415,374	437,689	958,586	887,328	864,613.

PETROLEUM SHARES ON THE DUTCH MARKET DURING 1908.

The following table shews the variation in the quotation of the leading petroleum shares on the Amsterdam market during 1908 :—

	On 2nd Jan., 1908.	On 31st Dec., 1908.	Lowest during the Year.	Highest during the Year.
Dordtsche Petroleum Maats.	—	129	112½	130
Royal Dutch Co.	280	317¼	270½	320
Moeara-Enim Co.	134½	149¼	131	151½
Perlak Co.	125	136	107¾	140
Oklahoma Petroleum Co. ..	—	102½	95½	113
Zuid Perlak Co.	85⅝	141¾	81	144
Sumatra-Palembang ..	90½	117⅝	88½	118½
International Roumanian Co.	78	18½	14½	84½
Bibi-Eybat Petroleum Co., Ltd...	37 7/16	30	30	39
Russian Petroleum & Liquid Fuel Co., Ltd.	17½	16	11¾	26½
Schibaieff Petroleum Co., Ltd.—Ordinary	18	5	4	17¾

The above figures clearly shew the contrast between the Dutch-Indian and the foreign petroleum companies, whilst the shares of the former have all advanced very considerably in price, the shares of the foreign companies have all gone down.

In the case of the Anglo-Russian oil companies the causes of the low quotations are well known to our readers, and we need not go into them here. The enormous depreciation of the shares of the International Co. is due to causes of the same order, chiefly mismanagement. After the proposals of the directors for reorganisation failed to secure the requisite majority, a commission was elected to investigate the position of the company's business in Roumania, and also enquire into the charges of mismanagement and corruption made against the previous management, and to report to the shareholders.

The Aurora Co., the shares of which are all held by the International Co., and which the refining adjunct of the last-named concern is also in an extremely critical position, having failed to pay the debenture interest when it last fell due, it is now threatened by a foreclosure. Negotiations have for sometime been proceeding in Berlin between various financial groups interested in the company with a view to its reorganisation, but the result is still in doubt.

The Royal Dutch Co. is interested in the Roumanian petroleum industry through the Astra Co., whose business is progressing in a very satisfactory manner, and promises to yield excellent results.

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Progress at Calinet.—The Romano-American Co.'s well 32 at Calinet, which recently struck oil, maintains its yield, 20 to 25 tons daily. The Anglo-Roumanian Co.'s well No. 4 has now reached a depth of 102 metres. At Caranicea, Messrs. Stefanescu and Co. struck oil in their No. 4 well with a yield of 40 tons per day. Wells 205 and 243 of the Concordia Co. continue to yield between them 55 tons daily. No. 243 has, up to the present, produced 4,600 tons, whilst 205 has produced 3,800 tons.

DETAILS OF BAKU PRODUCTION DURING NOVEMBER, 1908.

The following are the details of the production of crude oil at the Baku oil fields during November, as published in the latest issue of the *Neftiannoie Dielo* (in poods): -

	Number of Wells in Exploitation.	Production (in poods). By Baling	By Spouters.	Casual.	Total.	Average per Well per Day
Balakhany	751	5,799,169	—	6,067	5,805,236	270
Saboontchi	762	16,457,401	111,160	313,849	16,882,410	775
Ramany	206	6,235,607	755,000	12,310	7,002,917	1,219
Bebe-Aibat	253	8,713,619	313,140	900	9,027,659	1,289
Total in November, 1908	1,972	37,205,796	1,179,300	333,126	38,718,222	691
Total in October, 1908	1,939	39,038,282	653,857	355,499	40,047,638	697
Total in November, 1907	1,809	38,535,709	243,200	375,219	39,154,128	766

The production by spouters in November was obtained from the following wells:—

			Poods.
At Saboontchi	From Well No. 208	On the Caspian Society's Plot No. 168	111,160
,, Ramany	,, ,, No. 33	,, Assadulaeff's Plot No. 107	755,000
,, Bebe-Aibat	,, ,, No. 32	,, Zoubaloff's Group XX.	105,000
,, ,, ...	,, ,, No. 25	,, Nobel's Plot No. 27	208,140

During November the number of producing wells was increased by 94, of which 78 were old wells, the exploitation of which had been suspended, but was now resumed, whilst 16 are new wells just completed drilling. On the other hand, in 56 wells, exploitation was suspended in November, so that the net increase in producing wells was 38. For the several fields separately, the net increases were:—Balakhany, 26; Saboontchi, 1; Ramany, nil; and Bebe-Aibat, 11 wells.

The number of new wells completed in each field in November and results yielded by them are shewn below :—

	Number of Wells.	Average Depth.	Minimum and Maximum Depth.	Average yield per well per day. (in poods.)
Balakhany ..	5	812	707-1,008	539
Saboontchi ..	4	1,438	861-1,764	1,908
Ramany ..	3	1,533	1,253-1,974	2,394
Bebe-Aibat ..	4	2,184	1,981-2,761	1,214
Total ..	16	1,443	707-2,761	1,359

The number of wells which were in drilling in November was 285, of these 16 were started during the month. In addition, 88 old wells were being deepened. The total amount of work accomplished in old and new wells was 28,910 feet, about half of which was done at Saboontchi, in 152 wells.

The number of wells in various stages at the Baku oil fields at the end of November was :—

	Producing.	In Drilling.	Undergoing deepening, repairs, Cleaning, etc.	Abandoned.	Total.
Balakhany ..	739	33	61	461	1,294
Saboontchi ..	752	115	160	684	1,711
Ramany ..	203	46	82	224	555
Bebe-Aibat ..	251	68	80	139	538
Total ..	1,945	262	383	1,508	4,098

There were also 37 derricks in course of erection; of these 6 were at Balakhany, 25 at Saboontchi, 4 at Ramany, and 2 at Bebe-Aibat.

THE STORAGE, USE, AND CONVEYANCE OF MOTOR SPIRIT.

Official Report of the Evidence taken before the Recently-Appointed Committee.

The Committee appointed to consider the question of the storage, use and conveyance of petroleum spirit recently met at the Home Office, when evidence was given by Captain A. Desborough, H.M. Inspector of Explosives, and Mr. W. J. O'Donnell, Chief Assistant, Public Control Department, London County Council.

Captain Desborough gave the principal provisions of the existing Acts relating to petroleum spirit, and mentioned the points in which he considered these Acts to be defective, the chief points being:—

The limited scope of the powers conferred on harbour authorities in regard to bye-laws.

The absence of powers enabling railway and canal companies to make bye-laws.

The omission of all restriction on the conveyance of petroleum spirit except those imposed when it is being hawked.

The absence of definite regulations of universal application, and of any indication as to the character of the precautions to be taken in keeping petroleum spirit.

The absence of any obligation on the local authority to enforce the law, or to appoint officers for the purpose.

The excessive decentralisation which places the administration of the Acts in the hands of District Councils.

The absence of any provision for Government control and general supervision of the working of the Acts. There is no Government officer who has a legal right of entry.

Witness stated that neither the manufacture nor use of petroleum spirit is governed by the Petroleum Acts, and drew attention to the dangers attendant upon dry cleaning in private houses, and from pouring spirit down drains after use.

He considered that the main causes of accident in order are—

1. From leaky vessels, the most prolific cause.
2. From dry cleaning in dwelling houses.
3. From allowing petroleum spirit to be discharged into the sewers of towns.

He also thought that the label on vessels containing petroleum spirit should be amended, and give some caution as to the dangers of using spirit in a dwelling house.

Mr. O'Donnell stated that there are at present 1,757 premises licensed by the London County Council to keep petroleum spirit in quantities ranging from 1 quart to 150,000 gallons, and 1,400 premises under inspection where petroleum spirit is kept without licence for use with motor cars. The total quantity kept under licence is about 1,000,000 gallons.

The Council is of opinion that in view of the large number of accidents with petroleum spirit in recent years some amendment of the law is necessary to enable local authorities to take more effective steps to safeguard life and property.

He pointed out that the conveyance of petroleum spirit could only be dealt with by local authorities to a very limited extent by conditions in the licence, and suggested that the conveyance of petroleum spirit should be regulated by the general law of the country, and not by conditions inserted in licences.

He described the vehicles generally used for such conveyance, and suggested that the construction of road tank waggons for petroleum spirit should be subject to a specification to be prescribed by the Home Secretary. He also made several suggestions as to the construction of vehicles and condition of conveyance, drawing attention especially to dangers arising from the use of certain motor waggons.

He drew attention to the great increase in the use of spirit for domestic dry cleaning purposes, and gave a list of accidents arising therefrom.

He made the following suggestions:—

That except where spirit is kept or used solely for sale, the quantity at present allowed to be kept without licence under Section 7 of the Petroleum Act, 1871, be reduced and that a quantity not exceeeing one pint is sufficient.

That not more than one pint be sold in any one vessel unless the would be purchaser can shew that he is licensed under the Petroleum Acts or requires the spirit for motor car purposes.

That the labels of all vessels containing spirit offered for sale should contain a warning against opening the vessel in a room or place where there is a fire or exposed light, and state that the spirit gives off a highly inflammable and explosive vapour, which may be ignited by a flame several feet distant; and that the quantity permitted to be kept without licence, except for motor car purposes, be stated on the labels and that the penalty for infringing the law be also stated.

Witness then adverted to the dangers from allowing spirit to be discharged into sewers. Before the introduction of motor cars the risk was met in comparatively few sewers, but now a large area is affected and numerous explosions due to petroleum vapour have occured. Local authorities should have power to require interceptors on licensed premises to prevent spirit from reaching the sewers, and the law should make it an offence to allow spirit to enter any drain or drain inlet.

Witness was of opinion that the law should generally cover the use of spirit as well as storage.

He also stated that difficulty has arisen in connection with the keeping of petroleum spirit by motor car users under the Regulation of the Secretary of State (Locomotives on Highways Act). Persons keeping spirit do not always notify the local authority when they should do so, and also there is the difficulty of knowing whether to proceed against persons infringing the law under the Locomotives on Highways Act, 1896, or under the Petroleum Acts.

He therefore submitted that the power to make regulations as to the use of petroleum spirit for motor car purposes should be incorporated in the law dealing with petroleum, and that Section 5 of Locomotives on Highways Act, 1896, should be repealed. Motorists would not lose any of the privileges they at present enjoy, but they could be required to register their premises for the keeping of petroleum spirit with the local authority under the Petroleum Acts.

He suggested that this proposal would remove legal difficulties, render the administration of the law simple and consequently more effective.

BAKU AND ITS PETROLEUM REFINING INDUSTRY.

CONSIDERABLE CHANGES.

For about two decades in the older part of the Baku refinery district—the so-called Black City—considerable changes have been taking place. A correspondent of the *Neftiannoie Dielo* points out that in 1889 the whole of this suburb was covered with one mass of kerosene refineries. There were as many as 161 firms engaged in petroleum refining, and the largest among these was Nobel with an output of 16,000,000 poods of kerosene, while the smallest were Effimoff with an output of 453 poods, and Avsharoff with an output of only 100 poods of kerosene per annum. The total output in 1889 was 64,500,000 poods. In 1890 there were only 97 working refineries with an output of 73,700,000 poods of kerosene, and the following year the number of refineries further declined to 90, whilst the output increased to 78,800,000 poods. Of the small refineries, only those with an output of over 3,000 poods of kerosene remained. Thus in only two years, the number of working kerosene refineries declined from 161 to 90, *i.e.*, by 44·1 per cent., whilst the output increased by 22·2 per cent.

The process of reduction in operating firms and the demolition of the refineries, which have ceased working, went on remorselessly in the subsequent years, removing in its course not only the small refineries, but also a number of medium sized ones. In 1907 the number of of kerosene refineries was only 21, the largest being Nobel's with an output of 26,900,000 poods, whilst the smallest was the one of Messrs. Vartapetoff and Manveliantz, which produced 15,501 poods of kerosene. The total output for the year was 90,400,000 poods of kerosene. The estwhile ceaseless noise of boilers, pumps and pipe lines has been silenced, and in the place where there was formerly a whole forest of refineries of most varied sizes, beginning with the most primitive ones producing some hundred poods of kerosene per annum, we now find a small number of large and perfectly equipped establishments. Some of the small refineries were turned into engineering workshops or workmen's dwellings, but a larger proportion are used in their original state as depôts for storing and selling mazout intended for local use in the Baku district, and the situation of these old refineries in the centre of the pipe line system serving the large refineries renders them eminently suitable for such purpose.

The medium sized of these inactive refineries are generally kept under supervision and in a certain state of repair. However, a period of inactivity of 5, 10 or 15 years has in practically all cases led to the damage, and even total destruction, of the distilling and refining plant, the storage tanks, and more especially of the pipe lines. Such refinery, although appearing to possess intact the installation for distilling and refining, such as stills, boilers, settling and receiving tanks, pipe lines and pumps, it is absolutely out of date in construction and most uneconomical to work. After a certain time, such a refinery cannot in truth be called a refinery, and in reality represents a collection of old machinery and old iron, and is therefore doomed for destruction.

As all property at Baku is about to be re-valued for taxation purposes, people have now become particularly anxious to clear the land plots from these derelict refineries, and the numerous notices displayed everywhere in Black City announcing the sale of old refinery plant, clearly foreshadows the impending sweeping away of the more antiquated of the veteran refineries.

REPORTED SETTLEMENT OF THE MEXICAN OIL WAR.

Our American correspondent writes to the effect that it is now reported that the price-cutting oil fight which has for some months been in progress between Messrs. S. Pearson and Sons and the Waters Pierce Oil Co, in Mexico, is now at an end, the differences between the two companies having been adjusted.

[We learn that up to the present Messrs. Pearson have received no notification of this at their head offices in London. - Ed., *P.R.*]

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THE PETROLEUM TRADE OF YOKOHAMA DURING 1908.

The year 1908 was a good one for the petroleum industry in Japan, and the production from the native oil fields increased to a considerable extent, thus enabling the Japanese petroleum companies to supply a larger proportion of the lamp oil requirements of the Japanese oil markets than has hitherto been the case.

At present the duties levied on crude oil and lamp oil, respectively, make it more profitable to import crude oil and refine it in Japan, rather than to import refined lamp oil. Owing to this fact the construction of another refinery was commenced during last year. As, however, the duty on crude oil is to be altered in the early part of the present year, the result will be that there will be practically no advantage in importing crude oil as compared with importing refined oil. The heavy duty imposed on imported oils gives the native producers a very great protection and every inducement to increase their output, and they are actively engaged at the present time in seeking by new borings to do this with a view of supplying a larger share of the home market requirements with native oils.

A Japanese company, which last year erected a refinery in Yokohama, has increased its operations during the year and has imported about 45,000 tons of crude, and with the exception of one cargo, which was imported from Peru, the whole of this crude oil was imported from California. This company, says the Yokohama correspondent of the *Oil, Paint and Drug Reporter*, has, however, contracted for supplies of crude oil from the Indian Territory fields, and has shipped two cargoes which are now on their way to Japan, having been shipped at Port Arthur (Texas). No Russian oil was imported into Japan during 1908, although in the past this oil found a ready sale. On the other hand, the imports of lamp oils from America, which during 1907 fell off very considerably, have this year shewn a substantial increase, and are even larger than the imports for 1906. The imports of American kerosene in bulk and cases from California and the East coast of North America during 1908 amounted to about 5,200,000 cases, as compared with 3,650,000 cases for the year 1907. The imports of Eastern lamp oils from Sumatra and Borneo have been well maintained, and the demand for these oils is increasing.

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THE PETROLEUM PRODUCTION OF CANADA DURING 1908.

According to official statistics recently published, the production of petroleum in the Canadian fields during last year amounted to 18,000,000 gallons or 430,000 barrels. These figures shew that during the past year the Canadian industry made no headway at all, and in the majority of the fields there was little or no activity. No new oil-bearing areas were exploited on the one hand, and on the other the older producing territories shewed a slight decline.

As our readers are aware, the Dominion Government pay a bounty of 1½d. per gallon upon oil produced in the Canadian fields, and last year the bounties paid out under this head, month by month, were as under :—

	Dollars.		Dollars.
January ..	25,790	July	20,254
February ..	23,353	August ..	24,831
March ..	22,638	September ..	22,423
April	25,113	October ..	21,563
May	23,172	November ..	18,079
June	23,485	December ..	16,500

The quantities upon which these bounties were paid were as under, month by month (in Canadian barrels) :—

January ..	49,123	July	38,580
February ..	44,482	August ..	47,297
March ..	43,123	September ..	42,170
April	47,756	October ..	41,075
May	44,140	November ..	34,437
June	44,734	December ..	31,585

During the past twelve months there were imported into Canada about 8,000,000 gallons of petroleum products which were dutiable, and these paid a duty of 204,000 dollars, but the petroleum imports which were admitted duty free amounted to 28,300,000 gallons, 24,000,000 of which was crude oil, etc.

It should be here explained that the duty free articles are crude petroleum with a gravity of 0·8235 or over and gasolene with a gravity of 0·725 or under at a temperature of 60 f.

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The PETROLEUM INDUSTRY OF MEXICO DURING 1908.

A REVIEW OF EVENTS, REPRINTED FROM THE "OIL, PAINT AND DRUG REPORTER."

The year 1908 was a notable one in oil development in Mexico. The start has been made which will within the next few years place that country in first rank among other countries in oil production. Of this fact there is no dispute among oil experts and operators in the industry who are familiar with the situation. It has been proved that a wide territory bordering on the Gulf of Mexico is underlaid with oil. The exploitations are being conducted at widely separated points, and the results so far have been very satisfactory to the men engaged in the industry. That the several oil fields bordering the Eastern coast are connected with the same oil strata is the common belief of oil men in Mexico.

Notwithstanding the known existence of oil in large quantities and the growth of the production, the industry in that country is still in the formative stage. It is extremely difficult to obtain complete and reliable data as to the extent of the operations of the different concerns which are known to have producing wells and to operate refineries. There is much secretiveness in the conduct of the business. It is supposed that the object of this lack of publicity as to what is transpiring in this new industry there is largely due to the desire on the part of the men who may have producing lands to add to their possessions at the most reasonable possible figure. If there was a widespread knowledge of the actual productiveness and possibilities of some of the oil fields, a boom would probably set in which would cause a fabulous rise in the prices of lands and leases.

It is known that in the earlier stage of oil development in Mexico some of the American oil operators purchased and leased prospective oil lands at ridiculously low prices. The average Mexican land owner in the favoured section had no conception of the value of its holdings. Of late there has been a change in this regard, and in some localities where good wells have been brought in, fair prices are being paid to the original land owner. These prices are still considerably below those paid in the best producing fields of the United States. It is claimed by some people that the conditions do not exist for a boom in prices of virgin oil lands of that country for the reason, that most of the tracts are enormous in acreage. In some instances the holdlng of one man embraces as much as a million acres in a solid tract. This has precluded the smaller of the independent investor and oil operators who have been so much in evidence in most of the oil fields of the United States from getting a foothold in this country. The oil industry in Mexico at present is in the hands of a few large concerns, and the indications are that they will continue to carry on the greater part of the exploitation and actual production and refining that is being done.

There is practically no speculative feature of the oil business in Mexico at this time and it is doubtful if conditions can so change as to make such a thing possible. By this it is meant that lands are not being purchased with the view of an enhancement in value through oil development. The men who are involved in such transactions have in view only the exploitation and development of their respective holdings. To be sure, investigations are being made of the prospective and proved oil fields of that country by a number of Americans who have been hitherto identified with the speculative side of the oil industry in various parts of the United States, but so far as known none of these men have been able to obtain a foothold in that country. The laws and general condition of affairs there have a tendency to discourage speculation of this and other kinds.

The basis of the oil industry in Mexico is solid and substantial. The aggregations of capital which are back of the development work that is being carried on in the different localities are capable of bringing the industry up to its highest point of productivness.

It is considered somewhat remarkable, in view of the progress that has been made in oil exploitation in that country during the last two years, that attention was not given the industry long before. It was known to many people a good many years ago that the oil possibilities of certain localities of Mexico were exceedingly favourable. The surface indications were unexcelled. In some places liquid asphalt springs exist and other signs which are generally considered to be favourable for oil production are found abundantly. It is the conclusion of geologists and oil experts who have examined the territory that the coastal oil field of Mexico extends from the Rio Grande on the north to almost the extreme south-eastern limits of the republic, covering a distance of more than twelve hundred miles. It is conceded that there are doubtless places on this long strip of territory where oil may not be found by ordinary boring, but the prediction is made that in the not far distant future the coastal region will contain a number of the most productive oil fields in the world. The oil of the Mexico fields which are now in the producing stage is of the heavy variety with an asphalt base. While its refining qualities are not as good as that of the lighter oils it is found very profitable on account of its by-products.

The history of the oil industry of Mexico dates back only a few years. It contains only a few incidents of a sensational character. The pioneer in the industry is the Mexican Petroleum Co. This concern is composed principally of California men. Mr. E. L. Doheny, who was largely instrumental in promoting its organisation, is president. It is said that it was chiefly through Mr. Doheny's individual efforts that the first investments in Mexico oil lands by Americans were made. His company acquired about four hundred thousand acres of land, situated about 50 miles from the port of Tampico, with a view of thoroughly exploiting it for oil. The first wells were bored less than eight years ago, and oil in paying quantity was struck. From that time on there has been a steady development of the field. The company established a refinery at Ebano on the line of the Tampico-Aguascalientes division of the Mexican Central Railroad. It built a handsome headquarters' building upon the top of a knoll which gives a commanding view of the whole surrounding country. So quietly and secretively has the company conducted its operations that comparatively little knowledge is to be had as to the amount of oil produced in any given period. The number of its producing wells is also a matter of speculation. According to the statement of President S. M. Felton, of the Mexican Central Railroad, the latter has a contract with the Mexican Petroleum Co. to take six thousand barrels of oil daily for use as fuel in its locomotives. This contract has been in effect about two years. It is reported that a new contract is now being negotiated whereby the company is to furnish an additional several thousand barrels of oil daily for use as fuel by other roads comprising the National Railways of Mexico, of which the Mexican Central is now a part.

In the absence of any authoritative statistics on the subject it is conservatively estimated by men who claim to be acquainted with the situation that the output of the Mexican Petroleum Company's field at this time is approximately 20,000 barrels daily. It is reported that many of its wells are capped and that it is conserving its supply to conform to the market demands. It has large storage facilities and these are kept constantly filled, it is said. *(To be continued.)*

THE PETROLEUM EXPORT TRADE OF ROUMANIA.

STATISTICS FOR 1908.

Exhaustive details are published in the latest issue of the *Moniteur du Petrole Roumain* relating to the exports of petroleum products from Roumania based on the official customs statistics for the past year.

According to these statistics the total quantity of all petroleum products exported from Roumania during 1908 amounted to 460,704 tons, as against 428,073 tons in 1907, an increase of 32,631 tons, or about 8 per cent. In its turn, 1907 shewed an increase in exports as against 1905 of 102,519 tons, or 32 per cent.

The progress of the petroleum exports month by month during 1907 and 1908 is shown below :—

	1907 Tons.	1908 Tons.
January	16,423	19,527
February	25,091	19,941
March	32,530	62,962
April	40,541	41,790
May	36,199	48,843
June	44,716	23,359
July	33,690	59,246
August	51,119	28,826
September	24,122	46,805
October	52,911	52,911
November	22,969	27,984
December	47,762	28,330
Total	428,073	460,704

An increase in exports, even to a small extent, at a time when the crude oil production remained practically stationary is a sign of a healthy condition of the industry, and shews a good organisation in the refining and export branches.

The March figure of exports—62,962 tons—establishes a record for the monthly exports from Roumania. The average monthly figures for 1908 is 38,392 tons as against 35,303 tons for 1907.

The exports of various classes of products was as under :—

	1908. Tons.	1907. Tons.	1906. Tons.
Crude, Gas Oil, Residuals, etc.	76,196	76,062	54,799
Illuminating Oil	262,176	262,489	190,914
Benzine	122,332	89,522	79,493
Total	460,704	428,073	325,206

It will be observed from the foregoing figures that the exports of heavy oils (crude, etc.) and of illuminating in 1908 remained almost identically the same as in 1907, so that the increase falls entirely on the benzine exports which have increased by 38,810 tons, or about 37 per cent. The total exports in 1908, divided into the three classes in per cent., were as follows :—Illuminating oil, 57 per cent. ; benzine, 26½ per cent. ; and heavy oils, 16½ per cent.

The exports from Roumania to various consuming countries were :—

Destination	Crude oil, Residuals, Gas oil, etc. Tons.	Illuminating oil. Tons.	Benzine. Tons.	Total. 1908.
France	1,928	51,483	65,192	118,603
England	44,247	42,693	19,034	105,974
Egypt	316	79,628	—	79,944
Turkey	1,428	29,811	162	31,401
Germany	445	6,242	24,497	31,164
Italy	1,320	13,095	8,688	23,103
Belgium	731	18,308	1	19,040
India	2,769	16,052	80	18,901
Holland	16,866	—	84	16,950
Austria-Hungary ..	3,066	3,322	639	7,027
Algeria	—	—	3,491	3,491
Bulgaria	1,076	1,538	384	2,998
Norway	1,976	4	79	2,059
Other Countries ..	28	—	21	49
Total	76,196	262,176	122,332	460,704

The percentage of the total Roumanian petroleum exports taken by each of the leading consuming countries in the last three years was :—

	1908 Per Cent.	1907 Per Cent.	1906 Per Cent.
France	25·7	26·3	30 0
England	23·4	15·0	28·7
Egypt..	17·4	4·9	—
Germany	6 8	11·2	11·4
Turkey	6·8	5·9	6·4
Italy	5·0	5·0	10·9
India	4·0	13·5	1·8
Belgium	4·0	7·8	2·3
Other Countries	6·9	10·4	9·5
	100·0	100·0	100·0

Among the routes by which the petroleum exports are directed, the Black Sea port of Constantza occupies the foremost place with 399,615 tons. Next comes Braila on the Danube with 23,342 tons (practically all heavy oils), and Giurgevo, likewise on the Danube, with 19,367 tons (practically all benzine).

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THE PROPERTIES OF JAPANESE PETROLEUM.

The article here published was written by Mr K. Kobayashi, a prominent oil chemist now associated with the Hoden Oil Co., of Echigo, Japan, with the assistance of Mr. H. N. Cooper, of Berkley, Cal., Prof. T. Takamatsu, Prof. Y. Kawakita, Mr. M. Tsuzimoto, Chemist at the Japanese Government experimental station, Mr. Kondo, Superintendent of the Nauboku Oil Co., and Mr. T. Tashiro, of the Hoden Oil Co. It appeared in the January issue of the "Californian Derrick," and we congratulate our contemporary upon the publication of so interesting and authentic an article upon Japanese petroleum and its properties.

(*Continued from page 144.*)

In the Nishiyama oil field the three principal districts are as follows, in the order of their production: Nagamine, Kamada, and Miyagawa. I examined the oil from the Nagamine district. It is green in colour, with a specific gravity of 0·8953 at 15·5° C. The results of fractional distillation are as follows, each fraction being one-tenth of the crude oil by volume:—

No. of Fraction.	Specific Gravity.
First	0·7589
Second	0·8088
Third	0·8550
Fourth	0·8818
Fifth	0·8996
Sixth	0·9156
Seventh	0·9254
Eighth	0·9288
Ninth	0·9320

By fractional distillation, referring to boiling point, the following results were obtained:—

Fractions.	Per cent.	Sp Grav.
Under 150° C.	8·2	0·7901
150° to 200°	10·2	0·8181
200° to 250°	16·0	0·8616
250° to 300°	16·6	0·8856
Above 300°	49·0	—

When the fraction under 150° is distilled, it gives the following results: Under 80° C., 0·4 per cent.; 80° C. to 90° C., 0·4 per cent.; 90° C. to 100° C., 0·4 per cent; 100° C. to 110° C., 0·8 per cent.; 110° C. to 120° C., 1·0 per cent.; 120° C. to 130° C., 1·2 per cent.; 130° C. to 140° C., 1·2 per cent.; 140° C. to 150° C., 1·6 per cent.; above 150° C., 1·4 per cent.

The oil contains 0·136 per cent. of sulphur and 0·255 per cent. of nitrogen. The iodine absorption value by Huble's method is 5·16. The oil contains 8·75 per cent. of resinous matter. The oil contains no solid paraffin. The coefficient of expansion is 0·000072.

Only a small part of the Nishiyama oil is distilled off as burning oil, the larger part remaining as residuum. This residuum is a good material for lubricating oil. One of the refineries fractionates as follows:—Light oil, 4·3 per cent.; burning oil, 33·0 per cent.; intermediate oil, 38·0 per cent.; residuum, 34·7 per cent. The burning thus obtained, after washing with concentrated sulphuric acid and caustic soda, is called first-class oil, and the burning oil made by mixing light oil and one portion of intermediate oil is called second-class oil. Intermediate oil is used for various purposes, and the residuum is used for fuel. Other refineries fractionate as follows:—Light oil, burning oil, and intermediate oil, 45 per cent.; residuum, 55 per cent. This residuum is treated in various ways, but the following outline will give a general idea: The residuum is first of all run into a large tank warmed by means of steam so as to make it fluid, then run into a still, in which it is heated and distilled by the aid of vacuum pumps. Cut off at 21 to 19 Beaume.

Intermediate oil and material for spindle oil are distilled over and then the residuum is left behind in the still. The residuum is next treated with sulphuric acid and caustic soda in an upright iron vessel provided with an iron blower. The residuum, after being washed with the acid and soda, is transferred to a still, again distilled under diminished pressure. Thus three portions are obtained:—First, intermediate oil; second, light lubricating oil; third, heavy lubricating oil. The first fraction is washed with acid and soda and refined into burning oils of various grades. The second and third fractions are first subjected to a deblooming process. Then the oils are washed with acid and soda. Thus lubricating oils of various grades are made.

Machine oil from Nishiyama are of dark green colour and have a specific gravity of 0·960 at 15·5° C., and flashing point of 178° C. Viscosity is as follows by Redwood's viscoitmeter:—

510 seconds at 30° C.
252 seconds at 40° C.
170 seconds at 50° C.
108 seconds at 60° C.
80 seconds at 70° C.

I investigated the process of sunning, steaming, and blowing air for various kinds of our lubricating oils at Hoden Oil Co., by the courtesy of Mr. K. Kondo and Mr. T. Tashiro. I proved that we can improve the colour of lubricants by steaming and sunning, and raise up their flashing point, but oil is gradually oxidised. Some oxidised hydrocarbons absolutely insoluble in gasolene are produced by exposing to direct sunlight. I think this hydrocarbon probaby is the same as some hydrocarbons contained in California crude oil. Viscosity of lubricant from Nishiyama is generally high, but the flashing point of it is very low.

I have obtained many fractions with some definite boiling point according to Mr. Mabery's fractional distillate test. I have done many combustion analyses of each fraction, but unfortunately I could not determine the bases of the hydrocarbons by this combustion analysis. Now I will report only the relation of boiling point to specific gravity of distillates.

I took 2,500 c.c. of Nishiyama crude oil in a still and obtained 1,200 c.c. of distillate. The distillate is washed with 5 per cent. of concentrated sulphuric acid, 2 per cent. of caustic soda (15° B.), and finally with a large quantity of hot water. This process is repeated. The distillate washed is fractionated with dephlegemeter under diminished pressure.

Fractions. Deg. C.	Spec. Grav.	Deg. C.
100 to 125	0·7490	18·2
125 to 150	0·7481	16·8
150 to 175	0·8124	16·6
175 to 200	0·8344	16·4
200 to 225	0·8587	19·2
225 to 250	0·8758	19·2

Each distilate is washed twice with sulphuric acid, caustic soda, and finally with hot water. Each distillate is fractionated with special shaped flask made especially to avoid cracking under diminished pressure. Results obtained after repeated distillations :—

Fractions.	Sp. Gr. (1)	Deg. C.	Sp. Gr. (2)	Deg. C.
95—100	0·7350	24	0·7351	24
110—115	0·7538	24	0·7540	24
120—125	0·7599	24	0·7591	24
135—140	0·7779	24	0·7782	24
145—150	0·7885	24	0·7892	24
160—165	0·8044	24	0·8052	24
170—175	0·8147	24·5	0·8159	24
185—190	0·8286	24·5	0·8290	24
195—200	0·8377	24·5	0·8382	24
210—215	0·8532	25	0·8536	24
220—225	0·8595	25	0·8603	24
230—235	0·8735	25	0·8738	24
245—250	0·8794	25	0·8800	24

According to Professor Markoniff's investigation, Russian petroleum consists of napthene hydrocarbons, and he proved the relations between specific gravity and boiling point of napthene hydrocarbons as follows (Cyklische Polymethylene des Erdols) :—

	Boiling Point.	Spec. Grav.	Deg. C.
Hepta-naphthene (C_7H_4)	100 101	0·7324	17·5
Octa-naphthene (C_8H_{16})	119	0·7503	18
Nono-naphthene (C_9H_{18})	135-136	0·7652	20
Deca-naphthene ($C_{10}H_{20}$) ..	160-162	0·7936	15
Hendeca-naphthene ($C_{11}H_{22}$) ..	179-181	0·8119	0
Dodeca-naphthene ($C_{12}H_{24}$) ..	196·9–197	0·8055	14·0
Tetra-deca-naphthene ($C_{14}H_{28}$) ..	240–241	0·8390	0

Pennysylvania petroleum consists of paraffin basis, and Mr. Warren separates out the hydrocarbons as follows :—

	Boiling Point. Deg. C.	Specific Gravity.
Normal Octane (C_8H_{18})	125	0·7030
Noname (C_9H_{20})	136	0·7410
Decane ($C_{10}H_{22}$)	158	0·7570
Indecane ($C_{11}H_{24}$)	182	0·7650
Dodecane ($C_{12}H_{26}$)	198	0·7760
Tridecane ($C_{13}H_{28}$)	216	0·7920

According to Mr. Mabery's investigation, Texas crude oil consists of naphthene hydrocarbons ($C_nH_{2n}-2$), and he separates out the hydrocarbons as follows :—

Fractions. Deg. C.	Spec. Grav.	Deg. C.
130 135	0·8553	20
155-160	0·8746	20
190-195	0·8915	20

It is probably a fact that Japanese petroleum consists of naphthene hydrocarbons considering the relation between the boiling point and specific gravity of each distillate. Mr. S. Takano, superintendent of the Nippon Oil Co., investigated the composition of Japanese petroleum by combustion analysis and measurement of molecular weight and refractive index. He concluded that Japanese petroleum consists of napthene hydrocarbons.

There are two principal districts on the Niitsu oil fields—the Koguchi and Kumazawa districts. The oil is of a brown colour, but not so dark as the Higashiyama oil. Its specific gravity is 0·942 at 15·5° C. The oil is subjected to fractional distillation, each fraction being one-tenth of the crude oil by volume, and the density of each fraction was determined and the following results were obtained :—

Numbers of fractions.	Specific Gravity.
1st product	0·8679
2nd ,, ...	0·8879
3rd ,, ...	0·9080
4th ,, ...	0·9230
5th ,, ...	0·9471
6th ,, ...	0·9572
7th ,, ...	0·9600
8th ,, ...	0·9740
9th ,, ...	0·9852

By the fractional distillation referring to boiling point, the following results are obtained :—

Fractions. Deg. C.	Per cent.	Specific Gravity.
Under 200	2·5	0·7453
200-250	2·5	0·8479
250-300	25·0	0·8854
Above 300	70·0	—

The oil contains 0·154 per cent. of sulphur and 0·411 per cent. of nitrogen. The iodine absorption value by Huble's method is 8·052. The oil contains 17·5 per cent. of resinous matter. Coefficient of expansion is 0·000066. The oil contains a large quantity of solid paraffin. The fractionation is carried on in one of the refineries as follows :—Intermediate oil (0·901), 25 per cent.; heavy oil (0·954), 52 per cent.; pitch and loss, 23 per cent. The heavy oil is re-distilled by the aid of superheated steam, and 20 per cent. of the lighter portion is removed. Lubricating oils are obtained from this residuum. Other refineries fractionate as follows: Once run oil, 50 per cent.; heavy oil (0·924), 30 per cent.; pitch and loss, 20 per cent. Once run oil is redistilled, and 15 per cent. of heavy burning oil, which has a specific gravity of 0·868, and 25 per cent. of intermediate oil and 10 per cent. of residuum are obtained. Lubricating oils of various grades are made from this residuum. The following table shews the specific gravity and flashing point of lubricating oils from the above residuum :—

	Sp. Gr. at 155·5° C.	Flashing Point.
Spindle oil	0·9342	149° C.
Machine oil	0·9438	170° C.
Engine oil	0.9551	179° C.

(*To be continued.*)

CLASSIFIED IMPORTS INTO UNITED KINGDOM UP TO MARCH 8th, 1909.

IN GALLONS.

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Country.	Illuminating.		Lubricating.		Residuals.		Gas Oil. (Solar)		Benzine.		Fuel Oil.		Other Descriptions.		Totals.	
	Since Feb. 22	From Jan. 1.	Since Feb. 22.	From Jan. 1.	Since Feb 22.	From Jan. 1.	Since Feb. 22.	From Jan. 1.	Since Feb. 22.	From Jan. 1.	Since Feb. 22.	From Jan. 1.	Since Feb. 22.	From Jan. 1.	Since Feb. 22.	From Jan. 1.
Austria ...	—	—	6,520	24,930	—	120,810	—	—	—	—	—	—	—	—	6,520	145,740
Belgium ...	—	70	24.920	129,580	—	—	—	—	—	—	—	—	—	—	24,920	129,650
Canada ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dutch India.	—	400	—	—	—	—	—	—	28,200	5,661,890	—	80	—	80	28,200	5,662,450
Germany ...	6,240	165,300	27,860	181,550	–	—	—	—	—	—	—	—	—	4,640	34,100	351,490
Holland ...	—	300	—	960	—	—	—	—	—	286,210	—	—	3.600	11,080	3,600	298,550
Roumania ...	1,891,000	3,605,450	—	—	—	–	—	2,191,800	—	938,360	—	—	—	—	1,891,000	6,735,610
Russia ...	—	3,734,560	420	405.350	—	—	—	—	—	886,540	—	—	—	59,530	420	5,026,450
U.S.A. ...	1,639.040	22,093,690	2,300,280	9,095.740	10,880	23,600	—	11,609,170	—	3,489,210	345 800	1,355,080	134,780	1,172,530	4,430,780	48,898,550
Other Countries	—	—	1,580	9,050		—	1,000	1,000	887,380	887,380	240	240	—	1,000	890,200	898,670
	3.536,280	29,599,770	2,361,580	9.847,160	10,880	144,410	1,000	13,801,970	915,580	12,149,590	346,040	1,355,400	138,380	1,248,860	7,309,740	68,147,160

The American Oil Market.

New York, Week ended Feb. 27th.

Operations have been fairly active in many of the fields east of the Mississippi River during the week, a material gain in completed work and new production over the results of the former week being recorded. The fields of the Pennsylvania classification have maintained a creditable record, particularly West Virginia, where field work has been prosecuted with renewed energy. Completions for the week were nearly double those of the former period and there was more than a proportionate increase in the new production. This showing was not accomplished by any strikes of unusual capacity, for there was not a well of one hundred barrels or more daily brought in during the interval. In that State, Lincoln county maintains its lead in in activity and the results have been more than usually encouraging. Of the fifteen wells drilled eleven were in the producing class, the aggregate from which reached an average of 400 barrels daily. Ritchie and Roane counties in the same State furnished nothing out of the ordinary, so far as the size of completions was concerned, but one of the tests in the former county was regarded as promising for an extension of the Keener sand pool. The South-eastern Ohio section contributed a producer of exceptional capacity in the big lime development near Woodsfield, the initial flow being placed at 350 barrels a day. The new pool in this county is being extended and the daily production is reported to approximate 1,000 barrels. The Osage development in Island Creek township, Jefferson county, is also sustaining a gratifying record, says the *Oil, Paint and Drug Reporter*, and one of the week's completions was rated as a 200-barrel well. In the Lima field of North-western Ohio and Indiana, the former section remained well in the lead in the week's results, the new daily production being given as 668 barrels from 20 successful wells, against 225 barrels from 14 producers previously noted. A gain in completed work is recorded in Illinois returns, but the new production was not proportionately increased. Advices from the Kentucky fields note average developments for the season, the principal interest centreing in Wayne county, where the best of the week's completions was rated as a probable 50-barrel producer in the Slickford pool. The approach of spring seemed to stimulate operations in the outlying sections. A large acreage has been leased near the scene of the successful wildcat venture in Meade county, and some new tests have been undertaken to determine the possibility of establishing a connection with the Indiana formation. The most interesting of recent developments in the Gulf coast region is the activity at Sour Lake, Texas, following indications that were regarded as unusually promising for the exploitation of a field of fair dimensions. Some of the wells came in spouting considerably above the derricks, and while salt water formed a good part of the initial flow, there were sufficient evidences of oil to keep the interest of operators to a keen pitch. There is said to be no other field in Texas to offer the same incentive to drilling work as that at Sour Lake. The Markham and Goose Creek fields are not attracting particular attention.

Refined and Products.—The conditions affecting the local market for refined have been devoid of feature or new interest, and trading has followed generally routine lines. A material skrinkage is noted in the foreign movement, the week's clearance shewing a total of 3,870,340 gallons, of which 1,550,000 gallons were carried in bulk, against 8,788,920 gallons as the former total. Chartering forward account has attracted little attention, and the only engagement reported during the interval was one for 140,000 cases for March shipment to Japan, Philadelphia loading. Quotations shew no departure from the basis lately in effect. The demand for the products has been of more satisfactory proportions during the week, weather conditions favouring freer requirements for motor consumption. Under this influence the market reflects rather a steadier tendency, but the same quotations are current throughout. Clearance of naphtha for the week aggregated 180,550 gallons, against 39,770 gallons, as formerly noted, and against 30,100 gallons for the corresponding week last year.

CLOSING QUOTATIONS.

Crude at the Wells.

The quotations for oil represented by credit balances were :—

	Week ended Feb. 27. 1908.	Week ended Feb. 27. 1909.
Pennsylvania	$1·78	$1·78
Tiona	1·78	1·78
North Lima	1·04	1·04
South Lima	0·99	0·99
Indiana	0·99	0·99
Illinois, heavy, below 30 deg. ..	0·60	0 60
Kansas and Indian Ter., 32 deg. and above	0·41	0·41
Heavy	0·28	0·28
Humble, Tex.	0·73	0·53
Saratoga	0·71	0·53
Sour Lake, Tex.	0·75	0·53
Jennings, La.	0·70	0·55
Canadian Oil :—		
Petrolia	1·34	1·44
Oil Springs, less pipeage	1·41	1·51

Refined—For Export.

In cents.	Week ended Feb. 27. S.W. 110 test.	Week ended Feb. 27. W.W. 150 test.
Barrels, cargo .. .. per gal.	8·50	@10·00
Philadelphia	8·45	@ 9·95
Bulk, New York	5·00	@ 6·50
Bulk, Philadelphia	4·95	@ 6·45
Cases, New York	10·90	@12·40
Cases Philadelphia	10 85	@12·35

Refined in Cases—110 Fire Test.

	Week ended Feb. 20. 1909.	Week ended Feb. 27. 1909.
3,000 to 10,000	11·05	11·05
1,000 to 3,000	11·10	11·10

Refined—Jobbing Lots.

In barrels, pkgs. included.

	Week ended Feb. 20.	Week ended Feb. 27.
120 fire test, S.W. .. in barrels	11¾	11¾
130 fire test, S.W.	12¼	12¼
150 fire test, W.W.	13¼	13¼
In bulk from tanks	9	9
300 fire test	13¼@13¾	13@13¾

Naphtha and Gasolene.

	Week ended Feb. 20.	Week ended Jan. 27.
Naphtha, V. M. and P. deod. ..	12¾	11¾
Gasolene, 86 deg.	23¾	22¾

Pennsylvanian Oil Runs from Feb. 18th to Feb. 24th were :—Feb. 18th, 66,370 ; Feb. 19th, 20th, and 21st, 337,891* ; Feb. 22nd, 103,332 ; Feb. 23rd, 522,540* ; and Feb. 24th, 199,043.

* Includes Illinois Oil.

The Deliveries of Pennsylvanian Oil from Feb. 19th to Feb. 25th were:—Feb. 19th, 182,067 ; Feb. 20th, 21st, and 22nd, 479,190* ; Feb. 23rd, 187,203 ; Feb. 24th, 403,668* ; and Feb 25th, 203,471.

* Includes Illinois Oil.

Clearances for the Week.

During the week ended Feb. 26th and since Jan. 1, the clearances of petroleum, in gallons, from the port of New York, were as follows :—

	Week.	Year.	1908.
Refined	3,870,340	77,928,890	92,045,800
Crude	—	5,276,030	1,538,610
Naphtha	180,550	2,027,650	924,020
Residuum ..	—	60,850	566,800

Export Statistics.

The total exports from the port of New York and from the United States have been :—

	Gallons.
From New York, week ended Feb. 26th ..	5,160,453
Total from New York, from Jan. 1st, 1909 ..	109,182,216
Same period last year	124,266,344
Decrease	15.084,128
From United States, week ended Feb. 26th	14,844,875
Total from United States, since Jan. 1st, 1909	191,430,525
Same period last year	228,777,081
Decrease	37,346,556

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The "Review" Shipping List.

March 12, 1909.

(The following abbreviations are used in this table:—L. Left; P. Passed; Arr. Arrived; Sp. Spoken; Tr. Trading.)
Anglo-American Co.'s vessels marked thus (□): the Anglo-Saxon Co.'s tankers thus (*): and Messrs. Lane and Macandrew's thus (†).

Vessel.	From.	For.	Latest Date and Position.
ALCHYMIST	London	Smyrna	In Downs, Mar. 9
ALICE ET ISABELLE (Fr. bq.)	—	—	In Port, Feb. 24, laid up
AMERICAN	Batoum	Antwerp	At Zoungouldk, Mar. 3
APPALACHEE □	Kustendje	Alexandria	Arr. Feb. 26
APSCHERON	St. Louis (Rhone)	Batoum	L. Mar. 8
ARAL	Algiers	Tyne	Arr. Feb. 25, in Port, Mar. 9
ARAS	Amsterdam	Blyth	Arr. Mar. 6, in Port, Mar. 9
ASHTABULA □	Moji	San Francisco	L. Feb. 20
ASTRAKHAN	Tyne	Philadelphia	P. Butt of Lewis, Mar, 8
AUGUSTA	Puerto Mexico	London	Arr. Mar. 3, cld. Philad., Mar. 5
AUGUST KORFF	Philadelphia & Avonmouth	Liverpool	Arr. Mar. 5, in Port, Mar. 10
AUREOLE	London and Amsterdam	New Orleans	P. Lizard, Mar. 9
BAKU STANDARD	Ely Harbour	Cardiff	Arr. Jan. 24, in Port, Mar. 9
BALAKANI†	Port Arthur (Texas)	Sunderland	L. Mar. 8
BATOUM	Singapore	Channel	P. Gibraltar, Mar. 6
BAYONNE	Naples	Philadelphia	L. Mar. 6
BEACON LIGHT	Philadelphia	La Pallice	L. Mar. 10
BLOOMFIELD	Manchester	Emden & Galveston	P. Dover, Feb. 24
BORJOM	Alexandria	Batoum	Arr. Feb. 9
BRILLIANT	Tyne	New York	P. Butt of Lewis, Mar. 6
BROADMAYNE	Tonsberg	Tyne	Arr. Feb. 13, in Port, Mar. 2
BULLMOUTH*	Shanghai	Balekpappan	Arr. Mar. 5
BULYSSES*	Saitozaki	Singapore	Arr. Mar. 13
BURGERMEISTER PETERSEN	Philadelphia	Copenhagen	P. Del. Break., Feb. 27
BUYO MARU	Sabine Pass	Yokohama (via Suez)	At Singapore about Jan. 21
CADILLAC	Barrow & Belfast	Philadelphia	Arr. Mar. 4
CALCUTTA (B. b.) □	Tsingtan	San Francisco	L. Feb. 8
CAPTAIN A. F. LUCAS (with S.O. Barge 95)	New York	Savannah	Arr. Feb. 28 & sd. Mary Jacksonville
CARDIUM*	Batoum	Bombay & Cochin	P. Perim, Mar. 6
CARPATHIAN†	Antwerp	Tyne	P. Flambro' Hd., Mar. 11
CAUCASIAN†	London	Tyne	Arr. Feb. 25
CHARLOIS	Amsterdam	New York	P. Nantucket, Mar. 9
CHESAPEAKE □	Sabang	Port Natal	L. Mar. 2
CHESTER	Kustendje	Antwerp	Sd. Constant'ple, Feb. 25
CHEYENNE	London	Tyne	Arr. Mar. 10
CITY OF EVERETT (with S.O. Barge 94)	Portland (Me.)	New York	Arr. Feb. 16, in Port, Feb. 27
CIUDAD DE REUS	Rouen	New York	Arr. Feb. 26, in Port, Feb. 27
CLAM*	Singapore	Saitozaki	L. Feb. 3
CLEMATIS	Fernandina	Antwerp	Arr. Mar. 4, in Port, Mar. 8
COALTAR (s.)	Terneuse	Havre	L. Mar. 6
COL. E. L. DRAKE	—	—	Coasting U.S. and Pacific
COWRIE*	Shanghai	Palembang	Arr. Mar. 2
CUYAHOGA □	Shanghai	Singapore	At Suez, Mar. 6/7
CYMBELINE	Newport	Port Arthur (Texas)	L. Feb. 19
CZAR NICOLAI II.	Batoum	Hamburg	Cld. Constant'ple, Feb. 25
DAGHESTAN	Batoum	Hamburg	P. Constant'ple, Mar. 7
DAKOTAH □	San Francisco	Shanghai	L. Feb. 12
DELAWARE □	Liverpool	Philadelphia	Arr. Mar. 10
DERBENT	Batoum	Antwerp	P. Constant'ple, Feb. 28
DEUTSCHLAND	New York	Hamburg	Arr. Feb. 27, in Port, Mar. 7
DIAMANT	Philadelphia	Copenhagen	Arr. Mar. 9
EDWARD DAWSON	Port Arthur (Texas)	Liverpool	At Fayal, Mar. 8
ELAX*	Taketoyo	Balekpappan	L. Mar. 2
ELISE MARIE	Philadelphia	Malmo	Arr. Mar. 3
EL LOBO	Campana	Payta	Arr. Mar. 8
ENERGIE	New York	Konigsberg	At Pillau, Mar. 7
ERIVAN	Batoum	Manchester	P. Constant'ple, Mar. 5
ETELKA	Batoum	Rouen	S. Algiers, Mar. 6
EUPLECTELA*	Alexandria	—	S. Suez, Mar. 7
EXCELSIOR	Tyne	New York	Arr. Mar. 9
FRANCE MARIE (French bq.)	Cette	New York	L. Mar. 3
GEESTEMUNDE	Philadelphia	Rouen	In Havre Roads, Mar. 7
GENESSE □	Sabine	Queenstown	Sd. Norfolf (Va), Feb. 24
GEORGIAN PRINCE	Philadelphia	Rouen	L. Mar. 3
GOLDMOUTH*	Batoum	Colombo	Sd. Suez, Mar. 6
GUTHEIL	Tyne	Philadelphia	P. Dunnet Head, Mar. 5
HAINAUT (Du. sh.)	New York	Antwerp	P. Prawle Pt., Mar. 9
HARRY WADSWORTH	Hull	New Orleans	P. Prawle Pt., Feb. 27
HELIOS	Rouen	Philadelphia	Sd. Tyne, Feb. 26
HERMIONE	Philadelphia	Rotterdam	P. Del. Break., Mar. 1
HESPERUS	Tyne	New York	Arr. Mar. 8
HOTHAM NEWTON	Marseilles	Batoum	L. Feb. 26
HYRCANIA	Manchester	Batoum	L. Mar. 8
IOANNIS COUTZIS	Cardiff	Piræus	Arr. Mar. 3
IROQUOIS □ (towing barge Navahoe)	London	New York	Arr. Mar. 3, in Port, Mar. 8
J. B. AUG. KESSLER	Cardiff	New York	Arr. Mar. 9
JAMES BRAND	Grangemouth	Tyne	Arr. Feb. 24, in Port, Mar. 9
JOYO MARU	Port Arthur (Texas)	Avonmouth	S. Newport News, Feb. 26
JULES HENRI (French bq.)	Philadelphia	Cette	P. Del. Break., Feb. 18
KURA	Newport	New York	Arr. Mar. 4
LA CAMPINE	New York	Antwerp	Arr. Mar. 9
LA FLANDRE	Ghent & Fayal	Philadelphia	In Tyne, Feb 28
LA HESBAYE	New York	Antwerp	L. Mar. 1
LACKAWANNA □	Kustendje	—	P. Perim, Mar. 2
LANSING	San Francisco	Ancon	S. Panama, Feb 15
LE COQ†	New York	Havre	L. Mar. 10
LOUTSCH	Batoum	Havre	Sd. Gallipôli, Feb. 28
LUCERNA	Novorossisk	Bordeaux	L. Mar. 8
LUCIGEN	Trial Trip	Tyne	Arr. Mar. 6, in Port, Mar. 9
LUCILINE†	Rouen	New York	L. Mar. 10
LUMEN	Tyne	New York	Arr. Mar. 3
LUTETIAN†	Algiers	Havre and Rouen	L. Mar. 10
LUX†	Novorossisk	Rouen	L. Mar. 9
MAKKAVEI	Batoum	Odessa	L. Feb. 17
MANHATTAN	Venice	Batoum	S. Constant'ple, Mar. 2
MANNHEIM	New York	Amsterdam	Arr. Mar. 9
MARGARETHA	Hull	Batoum	S. Constant'ple, Feb. 27
METEOR	Batoum	Vladivostock	Cld. Perim, Mar. 6
MEXICAN PRINCE	Christiana	Middlesbro'	Arr. Jan. 19, in Port, Mar. 8
MIRA	—	—	In Port Blyth, Jan. 26, laid up
MUREX*	Honololu	Yokohama	L. Feb. 26
NARRAGANSETT □	London	New York	Arr. Mar. 2
NEWYORK	Rotterdam	New York	Arr. Mar. 5
NIAGARA	San Francisco	Taku	L. Feb. 23

Vessel.	From.	For.	Latest Date and Position.
OBERON	Port Arthur	Barrow	Arr. Mar. 10
OCEAN	Antwerp	Philadelphia	Arr. Mar. 7
OILFIELD	—	—	in Tyne, laid up
OKLAHOMA	Port Arthur	Philadelphia	Arr. Feb. 22
ORIFLAMME†	Philadelphia	Rouen	P. Lizard, Mar. 11
OTTAWA □	Manchester	Philadelphia	P. Fastnet, Feb. 27
OURAL	Batoum	Rouen	P. Constant'ple, Feb. 27
PAUL PAIX	Penarth	New York	P. Barry Island, Mar. 7
PAULA	New York	Hamburg	Arr. Jan. 12, in Port, Mar. 7
PECTAN*	Newp't News	Gulf Port	P. Sand Key, Mar. 2
PENNOIL	Philadelphia	Rotterdam	Arr. Mar. 7, in Port, Mar. 9
PETROLEINE	Philadelphia	Cette	L. Mar. 4
PHOEBUS	Hamburg	New York	Arr. Mar. 9
PINNA†	Payta	Yokohama	L. Feb. 25
POTOMAC □	New York	Liverpool	L. Feb. 28
PROGRESSO ARGENTINA (Ar. bq.)	Port Arthur (Texas)	—	Sp. Feb. 5 off Fowers Rks., Flda.
PROMETHEUS	Hiogo	Shanghai	Arr. Mar. 5
PRUDENTIA	Calais	Hull	Arr. Mar. 6, in Port, Mar. 9
PURELIGHT	Hamburg	Philadelphia	Arr. Mar. 9
QUEVILLY (Fr. bq.)	Rouen	New York	L. Feb. 11
RENDOVA (Br. bq.)	Philadelphia	Seville	Arr. Feb. 27
RION	Penarth	Philadelphia	P. Fastnet, Mar. 6
ROCK LIGHT†	Newport Nws	Galveston	L. Mar. 6
ROMANY*	Asmori	Singapore	Arr. Feb. & dry docked
ROTTERDAM	Amsterdam	New York	Arr. Mar. 4
ROUMANIAN†	Tyne	Port Arthur (Texas)	P. Bermuda, Mar. 8
RUSSIAN PRINCE	Tyne	Cienfuegos	P. Prawle Pt., Mar 2
SALAHADJI	Bombay	Aroe Bay	L Feb. 17
SAN CRISTOBAL	Port Arthur (Texas)	Liverpool	Arr. Feb. 12, in Port, Mar. 10
SAN IGNACIO DE LOYOLA (Sp. bq.)	Pasages	Philadelphia	L. Dec. 31
SANTA MARIA	Port Harford	Tocopilla & Tatal	Arr. Feb. 18
SANTA RITA	San Francisco	Honolulu	L. Feb. 26
SARANAC □	New York	London	L. Mar. 1
SAXOLEINE†	Tyne	New York	Arr. Feb. 28
SCHUYLKILL	Labuan	Cebu	Arr. Mar. 4
SEMINOLE □	New York	Monte Christo	Arr. Feb. 27
SERVIAN†	Tyne	Port Arthur (Texas)	P. Butt of Lewis, Feb. 25
SNOWFLAKE	Tyne	Cuba	Off the Wight, Mar. 1
SOYO MARU	Yokohama	Lobitos	Sd. Payton, Feb. 6
SPONDILUS*	Samboe	Europe	S. Port Natal, Mar. 4
STANDARD	Philadelphia	Havana	P. Del. Break. Feb. 28
STROMBUS*	Freshwater	Hong Kong	Arr. Mar. 3
SULTAN VAN LANGKAT	Nagasaki	Singapore	Arr. Feb. 16
SUN	Sabine Pass	Marcus Hook	L. Feb 28
SUNLIGHT (Br. bq.)	Dunkirk	Philadelphia	Arr. Feb. 27
SURAM	Newport	Port Arthur (Texas)	Arr. Mar. 9
SUWANEE □	London	Hull	Arr. Mar. 6
SVIET	—	—	Trading Levant and Black Sea
TAMARC □	Tyne	Philadelphia	Arr. Mar. 10
TELENA*	London	Philadelphia	Arr. Mar. 7
TEREK†	—	Philadelphia	P. Browhead, Feb. 27
TEXAS	Avonmouth	Sabine	P. Lundy Island, Feb. 20
TIFLIS	Antwerp	Port Arthur (Texas)	L. Feb. 20
TIOGA □	Philadelphia	Copenhagen	P. Del. Break., Feb. 26
TONAWANDA □	San Francisco	Moji	L. Jan. 27
TRINCULO	Port Arthur (Texas)	Portland	L. prev., Mar. 9
TROCAS	Calcutta	Singapore	Arr. prev., Feb. 17
TUSCARORA	Karikal	Calcutta	Arr. ab't Mar.
VEDRA	Balekpappan	Singapore	L. Mar. 7
VILLE DE DIEPPE (Nor. bq.)	Rouen	Philadelphia	L. Feb. 27
VOLUTE	Kurrachee	Bombay	L. Feb. 24
WASHINGTON	Baltimore	Kurrachee	At Port Said, Mar. 5/6
WASHTENAW	Portland (O.)	San Francisco	L. Feb. 13
WEEHAWKEN	New York	Bouc	Arr. Mar. 6
WILLKOMMEN	Tyne	Philadelphia	P. Butt of Lewis, Mar. 11
WINNEBAGO	—	—	Coasting U.S. and Pacific

Latest Market Intelligence.

LONDON OIL MARKET.

Supplied by Messrs. Benjamin & Gee, 31, St. Mary Axe, E.C.

March 12th, 1909.

The price of Refined Petroleum remains unchanged as follows:—Russian, 6¼d.; American, 6⅞d.; Water White, 7⅞d.; Roumanian, 7d.

LUBRICATING OILS

There are no changes to report, the latest quotations being for:—

American pale, £6 10s. to £10 10s.
American dark cylinder, from £8.
American filtered cylinder, from £11 5s.
No. 1 Russian, for Spot, £8 7s. 6d.

TURPENTINE.

The market for American Turpentine has again been flat, but is a little firmer towards the end of the week. For spot and April deliveries the quotation is 27/-; May/June, 27/3; and July/December, 28/3

LIVERPOOL OIL MARKET.

March. 11th.

Refined oils are quiet, and sellers quote 6¾d., for Russian, Galician or Roumanian; and 7¼d. to 8¼d. per gallon for American.

Petroleum Spirit continues at 1s. 0d. to 1s. 1½d. per gallon for American deodorised, according to quality on the spot.

LATEST AMERICAN PRICES.

New York, March 11th.

Refined, in cases, is steady at 10·90; Standard White, 8·50; Credit balances, 1·78c.

Philadelphia, March 11th.

Standard White is now quoted at 8·45.

RUSSIA. Baku, March 8th.

The Baku oil market is firm. Crude oil, spot, 21¾-22 copecs per pood. Residuals, 21¼ copecs. Kerosene, in ships, 31 copecs.

BELGIUM.

Antwerp, March 8th.

The petroleum market is firm. Price of Standard White, spot, 22 francs per 100 kilos; March, 22¼.

FRANCE. Paris, March, 6th.

Illuminating oil is quoted in bulk, in whole tank waggons, 25 francs per hectolitre; spirit, 33·75 francs per hectolitre. Special white oil, in barrels or cans, 33 francs per hectolitre.

GERMANY.

Hamburg, March 6th.

The kerosene market is weaker. The price of American Standard White is 7.35 marks per 50 kilos.; Galician, 7.15 marks.

HOLLAND.

Amsterdam, March 6th.

The petroleum market remains firm. American Standard White, spot, 12·20 florins per 100 kilos.

ROUMANIA. March 6th.

	Francs.
Crude oil from different fields, including pipe line charges, per 100 kgs. ...	4·50–4·70
Refined oil, exclusive of taxes, ex. refinery ...	8·70
Benzine, 717–720, including taxes	20·00
Benzine, 750–760	15·00–15·50
Residuals in tank waggons, at refinery ...	4·30– 4·35
Paraffin	120·00

Prices for Export.

Refined oil, f.o.b., per 100 kgs.	7·25–7·75
Benzine, sp. gr. 0·710–0·715, f.o.b.	17·00–18·00
„ sp. gr. 0·715–0·720 „	14·50–15·50
„ sp. gr. 0·730–0·740 „	10·00–11·00
„ sp. gr. 0·745–0·755 „	9·00–10·00

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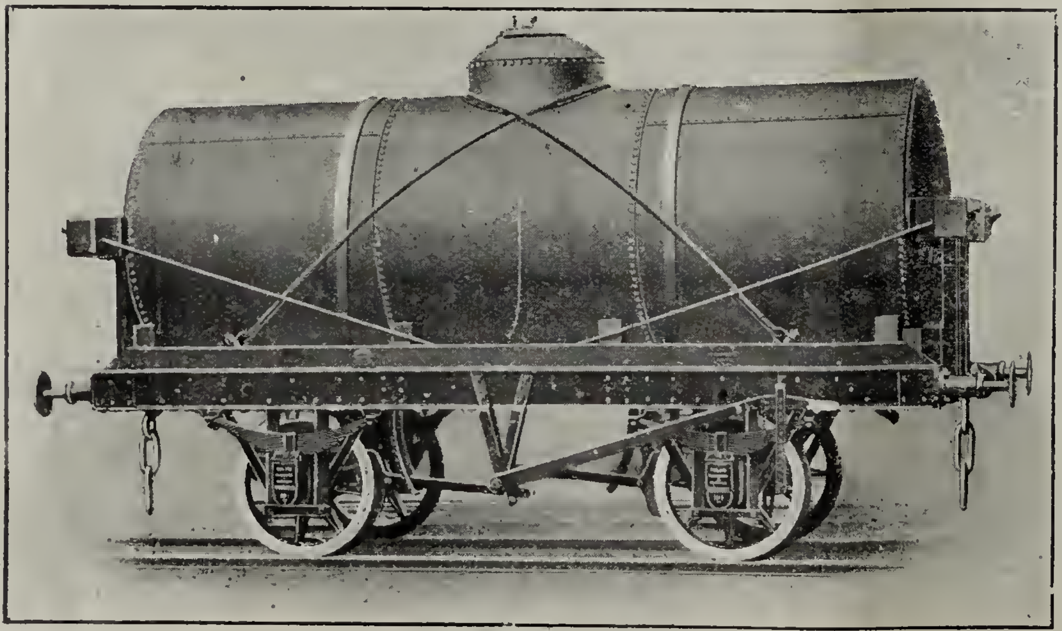
IMPORTS of PETROLEUM into UNITED KINGDOM

Specially prepared for this Journal by the Custom House.

FOR THE WEEK ENDED 1ST MARCH, 1909—

Date.	Port and Importers.	Description.	No. of Gals.	Port Whence.
Feb.	LONDON—			
23	Mordaunt Bros.	Lub.	12,500	Philadel.
23	Worthington and Boler	"	4,200	"
23	T. W. Hughes	"	2,400	"
23	Lubricating & Fuel Oils, Ld.	"	16,400	"
23	Produce Brokers' Co.	"	10,800	New York
23	Fielder, Hickman and Co.	"	6,600	"
23	"	Lub. Gr	1,240	"
23	Anglo-American Oil Co.	Lub.	4,000	"
23	Langley, Smith and Co.	"	2,400	"
23	American Express Co	"	220	"
23	London and India Docks Co.	Lub. Oil and Gr.	400	"
23	British Petroleum Co.	Lub.	800	"
23	London and India Docks Co.	"	70	Boston
23	Union Lighterage Co.	"	2,000	Antwerp
23	British and Foreign Wharf	"	120	"
23	John Cockerill Line	"	40	Ostend
23	London & India Docks Co.	"	400	Hamburg
24	Thames Tug & Lighterage Co.	"	4,000	Philadel.
24	Bowring Petroleum Co.	"	5,570	"
24	Mercantile Lighterage Co.	"	760	"
24	"	"	1,550	New York
24	London and India Dock Co.	"	5,920	"
24	G. and H. Green	L.Comp	8,330	"
24	British Pet. Co. (Rion)	Lamp	808,000	Philadel.
25	J. Harrison	Lub. Oil and Gr.	1,350	Antwerp
25	T. H. Lee	Lub.	170	Hamburg
25	A. Vaughan	"	170	"
25	Anglo-American Oil Co.	"	59,250	Philadel.
25	British Pet. Co. (Rion)	Lamp	808,000	"
25	Produce Brokers' Co.	Lub.	4,800	"
25	Lubricating & Fuel Oils, Ld.	"	4,920	"
26	London and India Docks Co.	Lub. Gr.	280	New York
26	G. Haller and Co.	Lub.	160	Antwerp
26	Page, Son and East	Lub. Oil and Gr.	600	"
26	Bowring Petroleum Co. (Augusta)	Spirit	887,380	Minatitlan
26	M. Record	Lub.	6,000	Trieste
27	T. H. Lee	Lub. Oil and Gr.	240	Hamburg
27	John Cockerill Line	Lub.	40	Ostend
Mar.				
1	T. H. Lee	Lub. Oil and Gr.	1,780	Hamburg
1	R. Thompson	Fuel	240	Colombo
1	Consolidated Petroleum Co. (Cheyenne)	Lamp	1,891,000	Kustendje
1	Page, Son and East	Lub.	80	Antwerp
1	Vacuum Oil Co,	"	520	Trieste
Feb.	LIVERPOOL—			
23	Vacuum Oil Co.	"	1,400	New York
23	W. B. Dick and Co.	"	4,100	"
23	G. B. Taylor	Lub.	61,800	New York
23	"	"	60,000	Philadel.
23	Meade-King, Robinson & Co.	"	46,000	"
23	Crew, Levick and Co.	M. Colza	8,370	"
23	"	Lub	29,270	"
27	W. B. Dick and Co.	"	43,060	"
23	Bowring Petroleum Co.	"	410	"
24	Crew, Levick and Co.	"	500	"
24	Bramwell, Fern and Co.	Lamp	750	"
24	"	Lub.	1,140	"
26	G. Stuart	Lub. Gr.	600	Hamburg
27	J. T. Fletcher and Co.	Lub.	500	Antwerp
Mar.				
1	Pickford's, Ltd.	Lub. Oil and Paste	370	Hamburg
1	C. C. Wakefield	L.Comp	500	Antwerp
1	A. Hopps and Sons	Lub.	2,600	Baltimore
1	Meade-King, Robinson & Co.	"	13,160	"
Feb.	BARROW—(By A. R.)			
9	Asiatic Petroleum Co. (Aug. Kessler)	Benzine	28,200	Pulo Samboe
	BRISTOL—			
23	Anglo-Bosphorus Oil Co.	Lub.	2,400	New York
23	H. R. James and Son	L.Resid.	10,880	"
23	"	Lub.	4,800	"
23	"	M.Colza	2,000	
24	J. and R. Bush	Lub.	10,600	"
24	"	Lamp	4,000	"
26	Heaton and Co.	Lub.	150	Antwerp
26	First Anglo-Russian Oil Co.	Lub. Gr.	290	"
18	(By qy.) Pickford's, Ltd.	Lub. Oil and Paste	200	Hamburg
	HULL—			
28	Wilsons and N.E. Co.	Lub.	260	"
23	T. Wilson, Sons and Co.	"	5,720	New York
25	"	"	280	Gothenburg
25	"	"	120	Copenhagen
25	Wilsons and N.E. Co.	"	1,640	Hamburg
25	"	"	120	Antwerp
25	Hull & Netherlands S.S. Co.	Tar Oil	3,600	Rotterdam
27	W. Gilyott and Co.	Lub.	62,600	New York
	MANCHESTER—			
23	Bramwell, Fern and Co.	"	20,540	Philadel.
23	Meade-King, Robinson & Co.	"	28,040	"
23	Worthington and Boler	"	840	"
24	Geo. B. Taylor	"	91,400	"
24	D. Currie and Co.	"	480	Hamburg
24	J. Riding	"	1,600	New York
24	J. T. Fletcher and Co.	"	40	Antwerp
25	Crew, Levick and Co.	M.Colza	3,370	Philadel.
25	"	Lub.	15,620	"
	NEWPORT—			
23	Jones, Heard and Co.	"	4,400	New York



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MANAGERS of the . . .

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Tank Steamer "ASTRAKHAN,"	4,500 Tons Oil Capacity.
Tank Steamer "ARAL,"	3,750 Tons Oil Capacity.
Tank Steamer "LUMEN,"	3,200 Tons Oil Capacity.

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No corrosive fumes given off. Prevents rust at the joints and consequent leakage. Stronger work. Less solder required.

IMPORTS.—(*Concluded*).

Date.	Port and Importer.	Description.	No. of Galls.	Port Whence.
Feb.	SOUTHAMPTON—			
22	P. E. Curry	Lub.	480	New York
Mar.	SWANSEA—			
1	Burgess and Co.	,,	270	Hamburg
Feb.	ABERDEEN—			
27	R. C. Reid and Co.	Lamp	4,000	,,
27	,,	L. Paste	110	,,
	DUNDEE—			
25	D. Alexander and Sons	Lub.	240	,,
	GLASGOW—			
22	(By qy.) Anchor Line	,,	6,400	New York
23	Clyde Shipping Co.	,,	1,270	Antwerp
	GRANGEMOUTH—			
23	J. Ross and Co. (J. Brand)	Fuel	345,800	Pt. Arthur
24	J. Currie and Co.	Lub.	960	Hamburg
	LEITH—			
26	J. Currie and Co,	Lub.	400	,,
26	Geo. Gibson and Co.	,,	2,000	Antwerp
Mar.				
1	,,	,,	400	,,
	J. Currie and Co.	,,	1,730	Hamburg
	BELFAST—			
1	G. Heyn and Sons	,,	420	Reval
1	J. C. Pinkerton and Co.	Lub. Gr.	300	Antwerp
			5,520,200	
	Deduct to Correct—			
Feb.	BARROW—			
9	Asiatic Petroleum Co. (Aug. Kessler)	Mot. Spirit	61,410	Pulo Samboe
	Total for the Week		5,458,790	

FOR THE WEEK ENDED 8TH MARCH, 1909—

Date.	Port and Importers	Description.	No. of Galls.	Port Whence.
Mar.	LONDON—			
2	London and India Docks Co.	Lub.	3,120	Hamburg
2	Produce Brokers' Co.	,,	5,200	Baltimore
2	Mordaunt Bros.	,,	2,630	,,
3	J. Harrison	,,	50	Antwerp
3	S. Pearson and Son, Ltd.	Gas	1,000	Puerto, Mex.
4	T H. Lee	Lub.Gr.	100	Hamburg
6	,,	,,	40	,,
8	,,	Lub. Oil and Gr.	230	,,
8	Argo Steamship Co.	Lub.	320	Bremen
8	Page, Son and East	Lub. Oil and Gr.	1,160	Antwerp
8	A. Duckham and Co.	Lub.	1,980	,,
8	R. Park and Co.	,,	1,180	Marseilles
8	W. H. J. Alexander	,,	2,660	Philadel.
	LIVERPOOL—			
2	W. B. Dick and Co.	,,	20,770	Baltimore
2	Schlieman's Oil Co.	,,	250	Hamburg
4	Burnaby and Chantrell	Lub.Gr.	780	New York
5	Worthington and Boler	Lub.	11,200	Philadel.
5	,,	Lub Gr.	1,200	,,
6	Bowring Petroleum Co.	Lub.	420	,,
6	American Line	,,	19,800	,,
6	Meade-King, Robinson & Co.	,,	65,560	,,
6	G. B. Taylor	,,	34,200	,,
6	Crew, Levick and Co.	,,	2,530	,,
6	,,	M.Colza	8,320	,,
6	W. B. Dick and Co.	Lub.	32,510	,,
6	Anglo-American Oil Co. (Aug. Korff)	,,	1,001,600	,,
6	Stockdale and Doel	,,	700	Boston
6	Midland Railway Co.	,,	370	Philadel.
8	Vacuum Oil Co.	,,	38,760	New York
8	Glover, Mathers and Stitt	,,	120	Hamburg
8	W. and H. Jackson	,,	200	,,
8	Pickford's	Lub. Oil and Paste	100	,,
8	W. Gibson and Sons	Lamp	2,050	Boston
	BRISTOL—			
4	Anglo-American Oil Co. (Aug. Korff)	Lub.	167,300	Philadel.
4	,, ,,	M.Colza	111,320	,,
4	Pickfords	Lub. Oil and Paste	1,480	Hamburg
Mar.				
4	Anglo-Bosphorus Oil Co.	Lub. Oil and Gr.	3,090	Hamburg
4	E. Stock and Sons	Lub.	2,000	,,
4	Pickfords	Lub. Oil and Paste	900	,,
4	Colthurst and Harding	Lub.	2,400	New York
5	H. Pritchard and Co.	Lamp	2,100	,,
5	,,	Lub.	2,730	,,
6	J. and R. Bush	,,	44,800	,,
6	,,	Lamp	10,000	,,
6	H. R. James and Sons	Lub.	28,200	,,
6	,, ,,	M.Colza	1,400	,,
24/2	(By qy.) W. G. Clarke	,,	480	Antwerp
	GOOLE—			
2	Goole S.S. Co.	Lub.	540	Hamburg
	GRIMSBY—			
2	J. Sutcliffe and Son	,,	510	Antwerp
4	,,	,,	40	Hamburg
4	,,	,,	740	Antwerp
5	,,	,,	650	,,
	HULL—			
2	Wilsons and N.E. Co.	,,	160	Hamburg
4	,,	,,	470	,,
4	,,	,,	2,280	Antwerp
	MANCHESTER—			
2	Henry Wells Oil Co.	,,	31,070	Philadel.
5/2	(By A.R.) British Pet. Co. (Suram)	Lamp	4,140	Pt. Arthur
	NEWCASTLE—			
3	Tyne-Tees S.S. Co.	Lub.	1,640	Antwerp
4	,,	,,	520	Hamburg
	MIDDLESBRO'—			
2	J. J. Sutherland	Lub. Gr.	70	Antwerp
5	E. Harris and Co.	,,	360	,,
8	,,	Lub. Oil and Gr.	440	,,
	SOUTHAMPTON—			
2	P. E. Curry	Lub.	1,200	New York
	DUNDEE—			
4	D. Alexander and Sons	,,	2,000	Hamburg
4	,,	Lamp	240	,,
	GLASGOW—			
2	Clyde Shipping Co.	Lub.	240	Antwerp
5	J. and A. Allan	,,	51,560	Philadel.
	GRANGEMOUTH—			
6	W. Graham-Yooll and Co.	Lamp	2,000	Hamburg
6	J. Currie and Co.	Lub.	1,200	,,
	LEITH—			
5	Henderson and McIntosh	,,	42,840	Philadel.
4	G Gibson and Co.	,,	200	Antwerp
8	,,	,,	4,160	,,
8	J. Currie and Co.	,,	960	Hamburg
	Deduct to correct—		1,789,540	
	BARROW—			
6/2	Anglo-American Oil Co. (Cadillac)	Lamp	1,430	New York
6/2	Anglo-American Oil Co. (Cadillac)	Benzine	10,120	,,
	HULL—			
18/2	T. Wilson, Sons and Co.	Lub.	5,200	,,
	MANCHESTER—			
20/1	Anglo-American Oil Co. (Aug. Korff)	,,	13,420	Philadel.
	BELFAST—			
13/2	Anglo-American Oil Co. (Cadillac)	Lamp	13,800	New York
	LONDON—			
4/2	W. H. J. Alexander	Lub.	2,000	Trieste
	HULL—			
22/2	T. Wilson, Sons and Co.	,,	57,400	New York
	PLYMOUTH—			
15/2	Anglo-American Oil Co. (Ottawa)	Gas Resid.	275,930	Philadel.
	Total for Week		1,410,240	
	Total for the Fortnight		6,869,030	

TEMPORARY ADDRESS.

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24, Forest Road,
Kew Gardens, S.W.

Late Manager, London Branch, Homelight Oil Co., Ltd.

P O. Tel. 1272 Richmond.

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The Petroleum Review.

By PAUL DVORKOVITZ.

Vol. XX. *(New Series.)* March 27th, 1909. No. 447

THE PETROLEUM REVIEW:

The ANNUAL SUBSCRIPTION for both English and Foreign readers is 26s., including Postage. Single Copies may be had at the offices at 1s.

The Editor would esteem it a favour if readers, when communicating with the various firms advertising in our pages, would mention the "Review."

Contributions upon items of interest are always welcomed from subscribers, but in each case these should be accompanied with the name and address of the sender, not necessarily for publication.

Editorial Notes.

Activity in the Batoum Export Trade. As we have already stated in these columns, the beginning of the present year has been marked with special activity in the Batoum petroleum trade. The appearance toward the end of last year of the Asiatic Petroleum Co. and of other large foreign firms as buyers of oil at Batoum for export, produced considerable animation in the trade and greatly increased its turnover, and this satisfactory state of things still continues. The bulk oil cargoes during January were shipped continuously one after the other, making up a total of 3,330,000 poods. Shipments of kerosene in cases were also active, having amounted during the month to 438,000 poods. The shipments of lubricating oil for the month amounted to 603,000 poods, and though they seem rather small in comparison with the kerosene shipments, are shewing a healthy increase.

The Commonwealth Oil Corporation, Limited. A few shareholders in this great Corporation have recently been ventilating imaginary grievances against both the general management and the directors of the concern. Knowing, as we do, the remarkable progress which has been made since the Corporation was formed, in regard to the development of the enormous resources fortunately possessed by this concern, we regret to see that "a rift within the lute" has been created by a small portion, who are not in that happy position of being able to possess their souls in patience. When one is dealing with a concern of such magnitude, it is imperative that at least some latitude shall be given to those at the helm, for it is impossible for mortal man to foresee the innumerable difficulties that have to be encountered in order to bring a concern to that position of being a permanent success. No company has ever risen to occupy a sound position in the commercial or industrial world in one day, and though the Commonwealth Oil Corporation may be blessed with the best men it is possible to obtain both in regard to the general management and the conduct of the business in London, one must remember that things never move with that rapidity many would like to see. The shareholders know the exact position, for the Corporation's chairman has been very frank with them. A word to the wise should be sufficient. Leave well alone: have confidence in those at the head of affairs, and all will go on smoothly and to the entire satisfaction of everyone concerned, but immediately strife is introduced, it is only reasonable to assume that the path of those who are about to find the additional capital needed will be rendered all the more difficult.

Petroleum Prospects in South Africa. Now that general attention is directed toward developing the petroleum resources of the British empire, it is hoped that prominent among the territories claiming notice will be that of South Africa, where the prospects for the opening up of productive territories appear to be exceedingly encouraging. In the Review exactly a year ago, we published a most interesting article by Mr. M. J. Stephan upon South Africa's petroleum prospects, and the contentions there stated by the writer, as the result of a most careful study of the two petroliferous zones, have been confirmed by subsequent investigations. As will be seen from the details published elsewhere in this issue of the Review South Africa bids fair to rise into great importance on account of the developments which shortly will be commenced, and we on our part, wish the exploitation of the various petroliferous areas all possible success. One thing is certain, if oil is struck in commercial quantities—and there seems every indication of this being the case—the Orange River Colony, the future of that part of our over-sea dominions will be secure. As an oil producing territory the geographical position of the Orange River Colony alone, is of the greatest importance, for at the present time, all petroleum products consumed in South Africa are imported—a state of things which, in the light of the developments shortly to be undertaken, may soon appear to be synonymous with carrying coals to Newcastle.

The Scotch Oil Trade. In the Review a few weeks ago appeared an editorial article in which we commented upon the policy adopted by some of the oil companies of Scotland in entering the English markets simply as a protest against the advent of some of our large distributing companies into Scotland with foreign oil. At the time we thought our remarks were sufficiently clear to prevent all misunderstanding, but judging by an article which appeared in the *Glasgow Herald* one day this week, it seems that they have conveyed to some minds an impression entirely the opposite to that intended. Our desire was to point out that, inasmuch as the English market was already captured by foreign oil, it would be an unwise policy for the Scottish companies to seriously attempt to obtain any strong footing in this market. The better plan was for them to stay at home and see that foreign oil did not seriously compete with their home product upon their own markets. In other words, our advice was that our Scotch companies—and we have many friends among them—should close their ranks, and protect their own interests at home, rather than seek to create openings in England, and at the same time jeopardise their position upon the Scotch markets. Now that we are on the subject, we would go further, and say that we would hail with satisfaction the formation of a joint fund in Scotland which should be utilised for keeping Scottish oil interests intact by preventing the progress of foreign oil in the markets north of the Tweed.

THE LONDON AND THAMES HAVEN OIL WHARVES, LIMITED.

ANOTHER SUCCESSFUL YEAR.

The report of the directors of the London and Thames Haven Oil Wharves, Ltd., which is to be presented to the shareholders at the eleventh annual meeting to be held at the Baltic, St. Mary Axe, London, E.C., next Wednesday afternoon, is again of a highly satisfactory nature. It states that the dividend on the preference shares for 1908 was paid on the 15th July, 1908, and 15th January, 1909, and after writing off depreciation, expenses of issuing new capital, and carrying £5,000 to reserve (thus making the reserve £15,000), the directors out of the available balance recommend that for the year ending 31st December, 1908, a dividend on the ordinary shares at the rate of eight per cent. per annum be declared, and that the balance of £3,204 11s. 2d. be carried forward. A payment at the rate of five per cent. per annum for the six months ending 30th June, 1908, was made in advance of the above dividend, and this amount will be deducted from full dividend when paid. The first and second debenture issues amounting to £35,000, which fell due for repayment on 30th June, 1908, were duly repaid. The company's works have been maintained in good order, and the cost of upkeep and renewals has been charged to revenue. During the year the company's business has been further extended, with satisfactory results.

ANGLO-MEXICAN OILFIELDS, LIMITED.

The Manager cables from Mexico as follows:—Borehole No. 1: depth 2,125 feet; increase 36 feet; formation, hard grey shale rock. Borehole No. 3; depth 1,000 feet; increase 75 feet; formation soft grey shale. Borehole No. 4: will commence next Saturday.

TEMPORARY ADDRESS.

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P.O. Tel. 1272 Richmond.

LONDON OIL SHARE MARKET.

Friday, March 26th, 1909.

Dealings in Oil Shares on the London Stock Market have been on a much smaller scale than movements recorded in our last issue, and a somewhat general reaction in prices has been registered, though the depreciation in value shewn on balance is not important in the majority of instances.

Burmah Oil Ordinary are $\frac{1}{16}$ lower at $5\frac{7}{16}$-$5\frac{9}{16}$, but this marks a recovery from lowest figure touched.

Assam Oil at 17s. to 18s., and Pacific Oilfields at 24s. 6d. to 25s. 6d. lose 6d. in each instance, and Lobitos Oil and Russian Ordinary are 3d. per share down at 26s. 6d. to 27s. 6d. and 1s. 9d. to 2s. 3d. respectively. Shell Transport Ordinary and Spies Petroleum, after being slightly easier in the interim, are unchanged at 54s. 6d. to 55s. 6d. and 10s. 9d. to 11s. 9d.

THE TIN PLATE MARKET.

Messrs. Norton, Owen & Co., of 4, Bishopsgate Street Within, London, E.C., report under date March 25th, 1909, as follows:—

The market has been dull during the past fortnight, and beyond a moderate demand for oil plates, there has been little enquiry, and prices are slightly easier, as below. There is still much uneasiness as to the possibility of labour troubles in the coal fields on questions arising on the Mines Eight Hours Act, which comes into operation on July 1st. The annual conference of the South Wales Miners' Federation concluded on Wednesday, and some of the miner's leaders delivered very bellicose speeches. The following is taken from the official report:—

Mines Eight Hours Act.—A long discussion took place upon the intimation given by the owners that the coming into operation of the Mines Eight Hours Act would terminate the Conciliation Board agreement, the following resolution being eventually unanimously adopted:—

> That this conference, whilst realising the necessity for a mutual re-arrangement of the hours of working at the collieries to comply with the requirements of the Mines Eight Hours Act, and authorising its representatives to negotiate with the owners for that purpose, refuses to accept the suggestion that the Conciliation Board agreement is terminated by the passing of this measure.

It was further unanimously carried:—

> That, failing a satisfactory agreement being entered into, we ask the Miners' Federation of Great Britain to put into force Rule 20.

The effect of this rule is that in the event of any district being attacked on the wage question, all the other districts should lay down their tools in their support.

Prices of oil sizes to-day:—

IC	18¾ × 14	124 sheets	110 lbs.	11/9 per box.
IC	19¼ × 14	120 ,,	110 ,,	11/9 ,,
IC	20 × 10	225 ,,	156 ,,	16/9 ,,

F.o.b. Wales. Tin lining and iron hooping extra.

Men Who Have Built up the Rothschild Business in Russia.

A SKETCH OF MR. A. M. FEIGL AND HIS ASSOCIATES BY DR. PAUL DVORKOVITZ.

The announcement which is elsewhere made in this issue that Mr. Arnold Michailovitch Feigl has recently been made an honorary member of the Baku Naphtha Association, while a scholarship in his name has also been founded at the Commercial School, is in itself sufficient to suggest the great work which that gentleman has accomplished in connection with the Baku petroleum industry. Such an honour is only extended to those gentlemen who have rendered yeoman service to the industry, and although Mr. Feigl's name is scarcely known outside Russia, yet the influence of his activity has not only been of solid value to the petroleum industry of that country, but to that of Europe at large.

It is 25 years ago since I first came into contact with Mr. Feigl, at Baku. At that time Messrs. Rothschild took an interest in the Russian petroleum industry, and bought up in 1883 a refinery belonging to Mr. Palashkovski, while they also acquired from that gentleman the first storage installation he had then constructed at Batoum. The position of the oil industry at Baku was then very unenviable. The crude oil was sold at from two to three copecs per pood, and yet the refiners could not make both ends meet. The transport of petroleum products to the interior of Russia was chiefly accomplished in barrels, for the bulk trade was then only in its infancy, and at that time, too, the residues from distillation had not found a demand as liquid fuel, and thus were frequently burned in the open fields. The refiners therefore mainly restricted their activity to the few months when navigation was open, and as the capacity for transport was very limited, it was not surprising to find that neither the refiners nor the producers had a very flourishing time of it. This was the position in the Russian petroleum industry when the wealthy firm of Messrs. Rothschild made their appearance. I well remember the fear expressed by everyone interested that, with their huge capital, they would soon eat up everyone in the industry. A great outcry was made, and a demand was even made to the Government to take steps to prevent the firm's establishing itself in Russia. But the antagonism to the new comers was but short-lived, and this, in my opinion, was chiefly due to the policy adopted by Mr. Feigl, who was appointed as representative of the Rothschild enterprises in Russia. His first step was to shew to the producers and refiners that instead of looking upon the appearance of the Rothschilds as an ill omen, their presence would prove a God-send to those engaged in the various branches of the industry. From the start, Mr. Feigl satisfied himself that the better plan was to keep the small refinery which the Rothschilds had purchased, its old size, and pay a fixed price to the other refiners for distilling crude oil which the small refinery could not treat. Not only did he do that, but he assisted those refiners whose position was such that they were unable to meet their own daily requirements, whilst he also advanced money to those people who had had experience in refineries, to construct refineries, guaranteeing them fixed incomes. In this way, Mr. Feigl assisted to enormously develop the industry. At the same time, the fears of the large companies, who were chiefly dealing with the interior markets, were allayed by informing them that the chief aim of the Rothschilds was to restrict their activity to the development of the Russian export trade in petroleum, and it was tact displayed in these early negotiations, that soon gave the Rothschilds a status not only among the refiners but also with the Government itself.

This line of policy was, no doubt, laid down by the representatives in Paris—Mr. Aron and my late dear friend, Mr. M. Baer - but my readers well know that it rests with the persons who are responsible for the carrying out of principles laid down, whether they succeed or not. In his work, Mr. Fiegl shone. His amiability, and his willingness to meet everyone in a spirit of impartiality and loyalty, soon earned for him an honoured name, and step by step under his guidance the activity of the Rothchilds was increased. But, in spite of progress, they adhered to those principles laid down at first to purchase as much crude oil as possible from other producers and to refine the oil at existing refineries, for they never attempted, although without doubt the temptation was very great, to use their financial position to monopolise the petroleum industry.

When the production of crude oil in Russia was very small, they restricted themselves, as I have said, to the export business, but with the development of the petroleum production, they found it was imperative that they should deal also with the interior trade, and consequently a separate company was formed under the name of the Mazout Co. for the purpose of dealing with this branch, the company to-day being second to none. The amount of capital required to develop the petroleum trade in the interior of Russia was enormous. In thousands of towns and villages, the Mazout Co. has opened its depôts, while the products of petroleum reach the consumers in the most remote corners of the Empire.

Mr. Feigl, in the course of nearly a quarter-of-a-century's association with Baku and its petroleum industry, has been foremost in the cause of charity, many institutions benefiting by his generosity. He saw to the provision of most comfortable accommodation for the workmen of his firm, and he devoted his life and soul to the prosperity and activity of the petroleum association in Baku. Now that he has taken up the position formerly held by my late friend—Mr. Baer—Mr. Feigl leaves behind him a grateful circle of friends in Baku, who will always remember with pride that he was one of the pioneers of the Baku petroleum industry. In his services he was supported by his younger brother who has recently been transferred as director of the Mazout Co. to St. Petersburg.

The success of Mr. Feigl has lain to some extent in the fact that he always secured the very best men for the proper positions, and a very good illustration of this is seen in that the two technical gentlemen, who have been responsible for the past twenty years for the respective branches of the concern—Mr. Gouchman at the refinery and Mr. C. Bardsky upon the oil fields—are now entrusted by the company with the positions which have been occupied until very recently by Mr. Feigl and his brother.

That those selections have been justified, one or two facts regarding the career of these gentlemen will be sufficient proof. Mr. Gouchman entered the service of the company in 1889 and for the first two years he devoted his attention to the preparation and manufacture of benzene from crude petroleum, while for the following two years he was manager of the chemical laboratory at the refinery. He then rose to be Assistant Technical Director of the refinery, and in 1895 he became Technical Director, occupying that latter position until he was lately transferred to the position Mr. Feigl has vacated. During the time of his service he introduced the continuous system of distillation, and increased the distilling capacity of the refinery from approximately 1,000 to 5,000 tons per day. He also introduced great improvements with regard to the method of heating stills by superheated air, while he effected great economy by the introduction of super-heated steam. The introduction of the continuous system for the lubricating oil refinery, which at present has a capacity of distilling 22,000 poods of residues per day, was another of his important improvements, while he also built one of the largest motor spirit refineries at present in Baku, this having been completed last year. I have reason to believe that everyone who inspects this refinery will admit that it is one of the finest and most up-to-date that they have ever set eyes upon. In the technical world also, Mr. Gouchman occupies a very important position. He has been for many years a leading member of the Technical Association of Baku, and his papers on a variety of subjects in connection with scientific investigations of petroleum which have been read before many international congresses in Europe, undoubtedly worthily place his name high in the scientific world.

His colleague, Mr. Bardsky, is one of the leading boring engineers in Russia. I need refer only briefly to one or two facts to shew that his work has been of the greatest possible value. He was the first to introduce compressed air for operating petroleum wells, while he has also been the gentleman responsible for the introduction of the utilisation for fuel purposes of the gases which come from the oil wells, using for this, the gas engines so closely associated with the name of Messrs. Tangye, of Birmingham.

I feel that it is unnecessary to dwell longer upon the course of the successful careers of these two gentlemen, for I think I have said sufficient to shew that they are the right men in the right place, and are worthy successors to Mr. Feigl and his brother in the important undertakings which they have in hand.

◆

BAKU PRODUCTION DURING FEBRUARY.

The total production of crude oil at the Baku oil fields during the month of February (o.s.) amounted to 35,520,548 poods.

The production of the leading firms operating in the Baku oil fields in February was as under :—

	Poods.
Nobel Bros.	5,300,000
Caspian and Black Sea Society	3,000,000
Mantascheff and Co.	2,000,000
Caspian Society..	2,000,000
Baku Naphtha Co.	1,700,000
Mirzoeff Bros.	1,200,000
Pitoeff and Co.	900,000
Aramazd Co.	900,000
Russian Naphtha Co.	800,000
Nagieff	800,000
Russian Petroleum and Liquid Fuel Co., Ltd.	800,000
Moscow-Caucasian Co.	700,000
Bibi-Eybat Petroleum Co., Ltd.	700,000
Neft Co.	700,000
Baku Russian Petroleum Co., Ltd.	700,000
Assadulaeff	600,000
Naftalan Co.	600,000
European Petroleum Co., Ltd.	600,000
Melikoff and Co.	500,000
Schibaieff Petroleum Co., Ltd.	500,000
Kavkaz Co.	500,000

THE TEXAS COMPANY,
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FUEL OIL AND GAS OIL
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TRIAL TRIP OF THE "LUCIGEN."

The S.S. "Lucigen," built by Sir W. G. Armstrong, Whitworth and Co., Ltd., at their Walker Shipyard, to the order of Messrs. H. E. Moss and Co., for the "Lucigen" Steamship Co., Ltd., of which they are the managing owners, is the latest addition to their fleet of tank steamers. The vessel is 401 feet long, 50 feet, 6 inches broad, with a depth of 30 feet, 9 inches, carrying about 6,500 tons of oil, besides bunkers, etc., on a moderate draft of water. The vessel is constructed and sub-divided so as to carry various descriptions of oil without fear of intermixing, and is provided with two pump rooms and double pumps for discharging the cargo either amidships or over the stern. A very complete installation of electric lighting has been fitted, together with all the latest improvements in deck machinery. The propelling machinery has been constructed by the North Eastern Marine Engineering Co., of Wallsend. The engines have cylinders 26 inches, 43 inches by 72 inches diameter by 48-inch stroke, and steam is supplied by four very large boilers at 180 lbs. pressure.

A most successful trial was carried out on Saturday during very stormy weather, notwithstanding which she attained a mean speed of 11·7 knots on a six hours' continuous trial, during which time everything worked with the utmost satisfaction. The vessel is classed 100 A1 special survey at Lloyds, and the highest class in Bureau Veritas. The specifications were arranged by Messrs. Atkinson and Young, and the construction of the ship and machinery was also supervised by them.

Amongst those present at the trial were Mr. E. A. Cohan, Mr. W. M. Cohan, Mr. J. J. Atkinson, Mr. H. E. Lang, and Captain A. Murray, who takes command of the vessel; Mr. D. Myles and Mr. Daglish, of the North Eastern Marine Engineering Co.; and Mr. A. Gulston, representing Messrs. Sir W. G. Armstrong, Whitworth and Co., Ltd.

LAUNCH OF THE SS. "PATELLA."

This tanker which is being built by Messrs. Swan, Hunter and Wigham Richardson, Ltd., of Wallsend-on-Tyne, to the order of The Anglo-Saxon Petroleum Co., Ltd., of 20, Billiter Street, E.C., was recently launched on the Tyne by Mrs. Coney.

The vessel is being built for the petroleum trades specially with a view to carrying various kinds of oil in one cargo. She has the highest class at Lloyds, and is being superintended during her construction by Messrs. Flannery, Baggallay and Johnson, of London, Liverpool and Rotterdam. Her dimensions are 418 feet overall, 51 feet 3 inches extreme breadth, and 31 feet moulded depth, and will carry 7,750 tons of deadweight on a light draft. The engines are supplied by Messrs. The Wallsend Slipway and Engineering Co., Ltd., of Newcastle-on-Tyne, and have cylinders $26\frac{1}{2}$ inches, 43 inches by 48 inches stroke, taking steam from three single-ended boilers.

The vessel has pump rooms and is fitted with electric light and winch gear for quick and efficiently handling of the vessel.

SS. "CHIRA."

On Saturday week, Messrs. Smith's Dock Co. launched from their North Shields yard, the screw tug "Chira," of London. The vessel was gracefully launched by Mrs. Frank Morris. The vessel is 90 feet long, 19 feet breadth, and 7 feet 9 inches moulded depth. She is constructed to carry a deadweight of 100 tons, having a special tank for carrying oil in bulk. She is to the order of Messrs. Lane and Macandrew, on behalf of Mr. William Keswick, M.P., of Leadenhall Street, London, E.C., and is being built under the supervision of Messrs. Flannery Baggallay and Johnson, and is classed 100 A1 at Lloyd's. The engines are by the Shields Engineering Co., and the boiler is constructed by Messrs. Eltringham and Co., of South Shields, and the vessel is fitted with electric light and towage appliances. She is also fitted for oil fuel and coal burning.

SS. "CONCH."

This vessel having been taken on an oil burning trial early in the month, when she obtained a speed of 11·37 knots under loaded conditions, was last Saturday week taken on a coal trial, so that the comparison might be made. The vessel is built by Messrs. Swan, Hunter and Wigham Richardson and Co., Ltd., Wallsend-on-Tyne, to the order of Messrs. The Anglo-Saxon Petroleum Co., Ltd., of Billiter Street, London, E.C. The ship and machinery have been superintended during construction by Messrs. Flannery, Baggallay and Johnson, of London, Liverpool and Rotterdam. Her dimensions are 312 feet length overall, 51 feet 3 inches beam and 31 feet moulded depth. The engines are by Messrs. The Wallsend and Slipway and Engineering Co., Ltd., having cylinders $26\frac{1}{2}$, 43 and 72 inches diameter with a stroke of 48 inches.

The vessel is built for carrying oil in bulk, and is specially fitted for carrying benzine, air extractors and other special means of ventilation being employed.

Six runs were made on the measured mile under coal burning conditions, and the result of these was a mean speed of 11·198 knots per hour.

AMERICAN NOTES.

The Indiana Field.—The Indiana field is now at its lowest ebb since the development first started—nearly twenty years ago.

The Lynn Oil Company.—This company has been formed for the purpose of taking over the properties of the Sour Lake Oil Co., in the Sour Lake field, and developing the same.

A Prolific Producer at Markham.—The Producers' Oil Co., which has been operating for some time at Markham, Texas, has completed its No. 17 well, which came in at the rate of 2,500 barrels.

To Test Orange County.—It is reported that several companies have lately been organised to test the petroleum producing capabilities of Orange county, Texas. One of the companies has a capital stock of $1,000,000.

Preparing to Drill on New Mexican Lands.—It is stated that the Harriman interests are now preparing to drill extensively upon the new territory recently acquired in Mexico, machinery and oil well supplies now being moved to the territory to be tested.

Litigation.—Considerable litigation has developed recently concerning the exploitation of the Sour Lake field. The Lone Pine Oil Co. and its associates, says the *Oil, Paint and Drug Reporter*, are now the plaintiffs in sixteen actions for injunctions in connection with Sour Lake field leases.

General Shutdown.—For four months commencing next Thursday—April 1st—a general shutdown of the wells in the Mid-Continent field will take place. This decision was arrived at a few days ago at a meeting of the Mid-Continent Oil and Gas Producers' Association. The general impression is that if all drilling is suspended for so long a period, the conditions in the field will greatly improve.

Production in the Fullerton Field.—The latest information from the Fullerton field of California is that the production is rapidly increasing, and during the present year the territory will produce close upon 5,000,000 barrels. Here the wells are frequently more than 3,500 feet deep, and drilling is consequently very slow. The producing sands are rich, and as an instance of this, one well belonging to the Santa Fe Railroad, which has been producing for for five years, is still yielding 300 barrels daily.

The Security Refinery Shuts Down.—The Security Refinery at Beaumont, belonging to and controlled by the Security Oil Co. has been shut down, in view of the legal uncertainties which confront the management. The case against it in the courts is suspended for an indefinite period, and under the circumstances the management do not feel disposed to jeopardise the additional money required to build a pipe line from the Caddo or Oklahoma field. The *Oil Investors' Journal* states that it is more than likely that the present complex state of affairs will drive the company from the State.

To Exploit for Cheap Fuel Oil.—It is stated upon reliable authority that the territory adjacent to the Cananea, Yaqui River, and Pacific Railroad in Mexico, which Mr. E. H. Harriman and his associates are building, is to be thoroughly exploited for oil. The opinion of the experts sent out to inspect the territory is said to be distinctly favourable, and now extensive wild catting is to be done by drillers who have been drafted into the country. It is said that Mr. Harriman's desire is not to enter the oil industry of Mexico, but to simply make certain of there being a plentiful supply of cheap oil fuel available for the railroad locomotives.

Why Not?—Our contemporary, the *California Derrick*, refers to the fact that to-day many of the passenger vessels running between the Californian coast and Eastern ports use liquid fuel in preference to coal, and points out that the Oriental Steamship Co. is so pleased with the performance of oil fuel upon its two large passenger boats that its new vessel for the Californian-China trade will be constructed to run on oil. The journal proceeds, "In England, where matters always move slowly, we may yet hope to see the time when our ocean greyhounds may entirely dispense with their miniature grimy army of stokers, and go over to liquid fuel, for even counting freights from other countries of origin, liquid fuel would still hold more than its own against coal."

THE COMMONWEALTH OIL CORPORATION, LIMITED.

IMPORTANT VISIT OF COMMONWEALTH PARLIAMENTARY REPRESENTATIVES TO THE PROPERTIES.

We have just received from our correspondent an account of a visit which was recently paid to the shale properties of the Commonwealth Oil Corporation, Ltd., in the Wolgan Valley of New South Wales by the Prime Minister in the late New South Wales Parliament—Sir William Lyne—and various members of the Federal House of Representatives. The party included many well-known gentlemen of Australia, prominent among them being Mr. Frank Tudor (the Minister for Customs in the Federal House of Representatives), and Senators T. D. Chattaway (Queensland), J. T. Walker (New South Wales), E. Findlay (Victoria) and H. Turley (Queensland).

The party were conducted by the Commonwealth Oil Corporation's Chief Railway Engineer (Mr. Henry Deane), and other officials, through the properties both at Wolgan and Torbane, all of which were closely inspected, and everybody was more than deeply impressed with the magnitude of the undertaking.

Sir William Lyne was subsequently interviewed by a representative of the *Australian Star*, and in reply to questions, stated that he was considerably impressed by the prospects of the industry in the property now being so rapidly developed by the Commonwealth Oil Corporation. He went to those properties, he said, because he had the interests of the industry at heart, and he wanted to satisfy himself as to the possible permanency and wealth of the mines. He had heard rumours that the company had been undertaking unnecessary expenditure, and he gave most of his attention to these two points He inspected the railway line, and it was a work of which the engineers might feel proud. The company had only done what was necessary to be done, and he was unable throughout his close inspection of the developments upon the Corporation's property to see where there had been either extravagance or waste.

The Minister for Customs (Mr. Frank Tudor, Member of the House of Representatives), too, is loud in his praises at the rapidity with which developments have proceeded on the Corporation's properties. In a recent interview upon his return from the Commonwealth Oil Corporation works at Wolgan Valley and Torbane, he spoke enthusiastically of what he had been shewn. He said he was much impressed with the magnitude of the shale and oil industry as now being developed. It struck him, as one interested in the welfare of Australia, that it was a pity the finest of the shale from the extensive mines should be selected for export, while under present conditions, only the residue could be profitably treated locally.

"I hope," added the Minister, in a conversation with a representative of the *Sydney Daily Telegraph*, "that the time will come when we shall be able to utilise locally the whole of this shale. The conditions are now entirely different to what they were two years ago, and the Commonwealth Oil Corporation, having shewn its bonâ-fides by the character and permanency of its works, and the large amount of money it has spent, I should feel warranted in treating the whole question of oil duties from a different standpoint to that previously existing."

Mr. Tudor added that he regretted there had not been more members of the Federal Parliament on the trip with him, so that they could have seen the magnificent resources that had been so long lying dormant, but were now being utilised.

The "Liming" of Crude Oil Before Distillation.

SPECIALLY . .
TRANSLATED .
FROM THE . . .
"NEFTIANNOIE
DIELO.". . . . .

◆◆◆◆◆◆◆◆◆◆◆◆◆◆

By PROFESSOR A. P. LIDOFF.

Notwithstanding the fact that from a mechanical point of view petroleum refining has reached a very high state of perfection since, by means of continuous distilling apparatus, it is now possible to obtain separate fractions within very narrow limits of boiling point, the same cannot be said of the chemical side of the business. It has been repeatedly stated and proved by experiment that crude petroleum, like coal tar, can be made into a first material for the manufacture of a whole series of various chemical products, and that the present method of utilisation of crude petroleum by turning it into illuminating, lubricating and fuel oils is, from the chemical point of view, far from being an ideal one.

The experiments of Prof Zelinsky have demonstrated that naphthenes by chlorine treatment can easily be transformed into acids and ethers; the experiments of K. V. Kharitchkoff, as well as those of Prof. Zelinsky, have proved the possibility of obtaining artificial fats—triglycerides—and that it was possible to obtain wax-like substances, being the outcome of naphthenic acids and naphtenoles of a high atomic weight. Prof. Markovnikoff has established the connection between the stearopthene of rose oil and the napthenes, *i.e.*, by this fact the black evil smelling crude oil becomes closely related to one of the most expensive essential oils; that crude petroleum, or to be more exact, certain of its derivatives may yield substances with a strong and pleasant odour, has been shewn in a previous work of the author on the question of the utilisation of the soda sludge left in the manufacture of kerosene. By submitting these latter to evaporation and dry distillation, a distillate is obtained, by the fractionation of which it is possible to extract products, consisting chiefly of ketones, and possessing a pleasant and strong odour. Mr. Stepanoff, in a work published in the bulletins of the Baku Technical Society, and dealing with the investigation of the lime sludge obtained at the Schibaieff refinery by the treatment of kerosene with lime, points to the existence in petroleum of substances capable of drying up in the air, leaving a film and therefore suitable for varnish making. It is also certain that Prof. Konovaloft's work, which shewed the way to obtaining nitro-naphtenic products, could serve for the manufacture on an industrial scale of nitric oils, representing the most perfect oils for internal combustion engines. Lastly, there is a whole series of investigations by a number of persons, which have proved that naphtenic acids extracted in their pure state, constitute a very valuable material for many various industrial purposes, such as the manufacture of soap, paints, waterproof textiles, etc.

This brief enumeration does not of course exhaust all possible chemical applications of petroleum, which, if this branch of the industry were placed on a more rational basis, could be carried into practice on an industrial scale. But even in the ordinary distillation of crude oil as it is done at the present day, the method adopted cannot be considered as rational. It can scarcely be considered rational to spend time, labour and heat on distilling off from the crude oil those substances, which subsequently are eliminated from the distillates, such as acids, phenols, sulphur compounds, unsaturated hydrocarbons, etc., and the elimination of which again involves the expenditure of time, labour and chemicals, *i.e*, sulphuric acid and caustic soda. If these substances had remained in the residue there would be an obvious gain on three points. (1) The yield of residuals would be increased by several per cent.; (2) less fuel would be required, as the above-mentioned compounds possess a great amount of latent heat; and (3) considerably less time would be required for refining the distillates, and what is most important, there would be a great saving in the cost of the chemicals used in refining. If we will assume roughly that under the above-mentioned conditions of working, the increase in the yield of residuals would be only 3 per cent., the saving in fuel would be 10 per cent., and the saving in chemicals would be one-third. A simple arithmetical calculation will shew that at a medium sized refinery treating 50,000 to 100,000 poods of crude oil per 24 hours, a considerable saving in expenditure could be effected, not to speak of the saving in time and labour.

That such a modification in the method of working is possible is confirmed by direct experiments. Already, a few years ago, experiments were carried out by students at the laboratory of the Technological Institute in Kharkoft of distilling crude oil with the addition of unslaked lime to the extent of one to three per cent., both in a comparatively large experimental still of 100 litres capacity, with the aid of steam superheated to 110—200° C., as well as in ordinary distilling flasks of 500 cc. capacity. Parallel experiments were carried out with limed and ordinary crude oil, and the distillates, in addition to the usual tests for boiling point and specific gravity, were also tested for their iodine number and acidity (quantity in milligrammes of caustic potash required to neutralise all the acid compounds contained in one gramme of distillate). The products chiefly distilled off were benzine, kerosene and solar oil.

Although the results of the different experiments made by various persons, and unfortunately for several reasons not always brought to a final end, were not always identic, it nevertheless can be asserted with a certain amount of assurance that the acidity of the distillates obtained by the distillation of limed crude oil was lower by 25 to 45 per cent. than the acidity of the distilates obtained by the distillation under identic conditions of the same crude oil, but without the addition of lime.

The experiments were made with Baku as well as with Grosny crude oils. Much less harmonious results were obtained in determining the iodine numbers, which indicates the presence of unsatured compounds, as the variations in the numbers did not always shew a decrease in the case of distillation with lime, which of course may also be dependent on the greater or lesser care taken in distillation.

It can therefore be stated that the liming of crude oil before distillation beyond a doubt considerably (on the the average by 35 per cent.) decreases the contents of acids in the distillates, and quite probably also reduces the contents of sulphur compounds, and also of unsaturated compounds, *i.e.*, this method of working improves the quality of the distillates. Should this be so, then it is clear that part of the substances, which under the usual system go over into the distillates, in this way remains in the residuals, which of course increases the yield of the latter, and reduces the quantity of fuel used for the distillation.

For the distillation of sulphur containing crude oils, preliminary liming may be of practical value, for although Frasch's method enables to desulphurise the distillate, it requires a rather complicated apparatus and the expenditure of expensive copper.

In England at one time in the manufacture of illuminating oil, the addition of lime to the coal was practised; this coal liming process enabled it to receive a gas containing considerably less sulphur than usual, and which was therefore much cheaper to purify. This process did not come into quite general use only because the lime caused greater wear of the fireclay retorts. If the manufacture of gas was carried on in metallic retorts the liming of coal for carbonisation would undoubtedly have received a wide application.

Of course, in considering this new method of working, we must not overlook the question of a possible deterioration of the quality of the residuals. This question, of course, can best be answered by practical experiments. On the face of it, however, it seems scarcely likely that the addition of a small quantity of lime can seriously effect the properties of the liquid fuel. The fact is that there is no need to introduce into the crude oil any large quantity of lime. Assuming that the contents of acid compounds (taking into account the average atomic weight of naphtenic acids) in the crude oil is one per cent. then theoretically, the necessary and sufficient quantity of lime for combining these acid compounds into non-volatile lime salts, does not exceed 0·25 per cent., which can scarcely affect the quality of the residuals by raising the percentage of ashes contained in the same.

Of considerable practical importance is also the question of the best way of carrying out the liming of crude oil without any great trouble or costly installations. Without attempting to arrive at a final solution of this question in the present article, the author merely indicates the line which may be followed in elaborating this question. Mixing of large quantities of crude oil with lime in agitators is out of the question, both on account of the great amount of power which would have to be expended, and the great cost of the installation. The author recommends that the liming shall be effected by passing the crude oil through a tank-tower containing a series of shelves, covered with a layer of broken or burnt unslaked lime Such tank-tower may be built in the manner of shelve scrubbers, and should be placed on the way of the passage of the crude oil, either between the supply tank and the preheater, or between the preheater and the stills. The speed of the movement of crude oil through the liming apparatus will depend on the aggregate surface over which the oil will be passing inside the latter, which would determine the duration of the action of the oil and lime upon one another. If the liming apparatus will be placed between the supply tank and the preheater, it is obvious that parallel with the chemical action of the lime on the acid and ether compounds, and also on the phenols, there will also result the drying of the crude oil and the formation of a hydrate of lime. On the other hand, if this liming apparatus will be placed between the preheater and the stills, there would probably be a more energetic mutual action between the preheated crude oil and the lime. Experience only can shew how completely the lime would be utilised in either of these cases. For continuity of work it would of course be necessary to have two liming apparatus, so that one would be working whilst the other was being cleaned and recharged.

In view of the comparatively small cost of the installation of the proposed liming apparatus, and in view of the above indicated advantages of the proposed new method of working, the author suggests that it would be worth while to try it in practice on a fairly large scale. The used up lime, saturated with crude oil, could be utilised for the manufacture of illuminating gas and of lime coke, which latter is a valuable material for making calcium carbide.

DETAILS OF BAKU PRODUCTION DURING DECEMBER, 1908.

The following are the details of the production of crude oil at the Baku oil fields during December, as published in the latest issue of the *Neftiannoie Dielo* (in poods): -

	Number of Wells in Exploitation.	Production (in poods).				Average per Well per Day
		By Baling.	By Spouters.	Casual.	Total.	
Balakhany	758	6,128,287	—	7,032	6,135,319	270
Saboontchi	761	16,950,562	—	333,018	17,283,580	761
Ramany	201	6,463,896	—	11,200	6,475,096	1,076
Bebe-Aibat	257	9,003,421	220,427	7,250	9,231,098	1,288
Total in December, 1908	1,977	38,546,166	220,427	358,500	39,125,093	667
Total in November, 1908	1,972	37,205,796	1,179,300	333,126	38,718,222	691
Total in December, 1907	1,737	38,603,658	2,231,492	410,322	41,245,472	791

The total production by spouters was obtained from Nobel's well No. 25, on plot No. 27, at Bebe-Aibat.

In addition to the above, there were produced in December at Surakhany 23,859 poods of white crude oil, 52,384 poods of black crude oil, and natural gas in a quantity equivalent to 373,857 poods of crude oil.

PETROLEUM PROSPECTS IN SOUTH AFRICA.

For several years the petroleum possibilities of South Africa have been discussed in numerous quarters, but it is only of comparatively recent date that the presence of oil indications in Orange River Colony have aroused the interest of leading men in the capital and other parts of the Colony. One heard considerable talk nowadays of the oil resources of the British Colonies and the necessity for their development, and therefore it is not at all strange that at the moment eyes are turned to South Africa in this direction.

Early last year, the South African Oil Corporation had a meeting of its directors at Bloemfontein, and at this meeting it was reported that the corporation's geologists had concluded their investigations of several localities in Orange River Colony, and the conclusions they had arrived at were, that there is a series of oil basins clearly defined in the Colony in a trend from north-east to south-west.

Since that time drilling has been proceeding continuously upon the commonages of Clocolan and Ladybrand, and this, a representative of the REVIEW was informed by a London gentleman in close touch with the developments, has been most successful. The active co-operation of the Government has been secured in view of the important bearing which the production of petroleum will have upon the future of the Colony, and it is rumoured that an influential English company will shortly enter the Colony in order to increase the number of wells which have already been sunk. Upon this subject the REVIEW hopes to return in the course of a few weeks.

In the meantime, it will be of great interest to briefly refer to the more promising areas in Orange River Colony which are now looked upon as the centre of South Africa's coming oil industry.

Careful investigations relating to oil have been proceeding in the Orange River Colony ever since the war, but more particularly within the past few months. A vast amount of ground has been surveyed, and this has resulted in the definition of a broad oil-belt, which stretches across the Colony, roughly, from north-east to south-west, the districts of Harrismith, Bethlehem, Senekal, Ficksburg, Ladybrand, Thaba 'Nchu, Bloemfontein, Wepner, Smithfield, Edenburg, and Fauresmith being in the direct line.

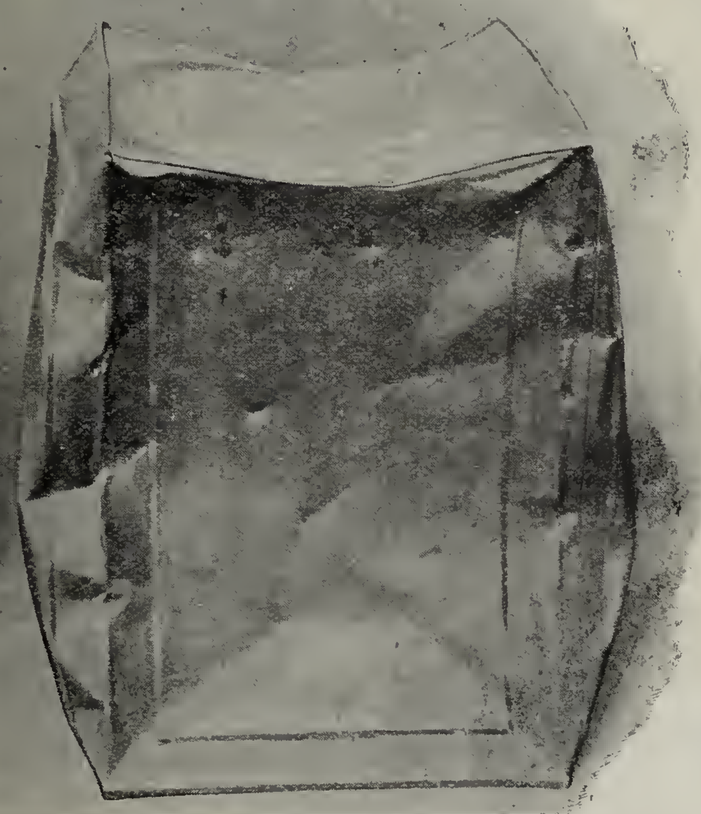
The discoveries in the Ladybrand district, embrace oil springs, oil shales, ozokerite, blue clay, coarse sandstone impregnated with oil, bituminous tufa, and other indications such as fossil fish, shells, etc., belonging to a very early period.

The basins in each case are clearly defined, and the enclosed ground consists of the undulating country which gives the synclines and anti synclines of petroleum fields, while the whole area is intersected by huge igneous dykes which dip vertically, and which still retain on their sides, and in their cleavage, in many cases flakes of crude oil, and a strong smell of paraffin through the subterranean reservoirs.

As we have said, we hope to again refer to the question of the petroleum resources of South Africa in an early issue of the REVIEW.

CAN-MAKING PLANT.

American "Hemmed-edge" Can, showing how easily the end can be forced off.



"Rhodes" "Double-seamed" Can, after being heavily hammered the ends are just as firmly attached.

DOUBLE SEAMED CANS, as made by "Rhodes" Patent Machinery, are produced at **same or less cost** in every respect as the "Hemmed-edge" Can.

Sole Makers— **J. RHODES & SONS, LTD.,** Grove Iron Works, WAKEFIELD, ENG.

THE GOVERNMENT LANDS AT BAKU.

The chairman of the twenty-seventh meeting of the Baku Petroleum Association, Mr. Rugevitch, has addressed the following telegram to Mr. V. I. Timiriaseff, the Minister of Commerce and Industry, embodying the conclusions of the meeting on the questions of the leasing out of the Government petroliferous lands.

"The question regarding the most suitable methods of handing over for exploitation of the Government petroliferous lands was discussed by the twenty-seventh meeting of the Baku Petroleum Association. Briefly, the conclusions arrived at by the meeting are the following. The desire expressed by the Imperial Duma that the bill against the leasing out of the Government petroliferous lands should ensure a normal output and reasonable prices for petroleum products, is scarcely possible of realisation, since both the crude oil output and price depend on natural conditions and economic factors, which in their nature do not lend themselves to legislative regulation. The abnormal condition in which the Baku petroleum industry is now situated, apart from many other causes, is also due to the exhaustion of the fields, which have been long in exploitation, which has not been compensated for a period of eight years by the bringing into exploitation of any of the fresh lands, which are held exclusively by the Government; therefore, the leasing out for exploitation of the Government lands is absolutely necessary in the near future, and as the only admissible method for leasing out Government lands must be considered public auctions.

"On the question what should be the subject of the competition (bidding), opinions were divided. Some members of the meeting considered that bids should be for a lump sum payment with a fixed percentage of royalty, that by such method, reckless speculation would be eliminated from the auctions, as well as an excessive rate of royalties, which, subsequently when prices of crude oil decline, become an unbearable burden to the lessees. Others held that the bidding should be in the royalties, considering that if bidding would be for lump sums, the smaller producers would be precluded from taking part in the auctions, and thus prevented from acquiring land reserves, and it is these small producers which are badly in need of such fresh lands. The same persons suggested that in view of the comparative smallness of the reserve of undeveloped Government oil lands, and the great demand for them, speculation at the auctions is unavoidable, but cannot do much harm. The view that the object of the bidding shall be the royalty payable to the Government was upheld by a majority of twenty-three against two.

"The meeting further considered that without waiting for the passing of a general petroleum law for the Empire, special regulations have to be introduced for the Baku district to meet the local requirements of the industry. The regulations regarding the leasing out of Government lands must be fixed by law, and not left to the discretion of the executive authorites. The meeting requested that representatives of the association shall be allowed to take part in the framing of such law, and the draft law when completed shall be submitted for consideration by an extraordinary meeting of the Baku Petroleum Association."

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Swansdown, Snowflake, Mayflower, Shamrock & White Light Petroleum.

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RUSSIAN NOTES.

Anapa.—On Count Kankrin's petroleum property at Suvorovo-Tcherkesskaia, near Anapa, there was in January a production of 2,026 poods, and only 50 feet of drilling work was done there during the month.

Sale of Ramany Lands.—The Minister of Commerce and Industry has sanctioned the transfer by Mr. S. S. Tagianossoff of his lease on plots Nos. 31, 59, 60 and 62, at Ramany, to the Baku Naphtha Co. These plots have an aggregate area of 1¾ acres.

Messrs. T. F. Kolesnikoff and Sons, petroleum producers and shipowners of Baku, have in 1907 earned a profit of 150,656 roubles. The company has debtors for 499,614 roubles, and creditors for 1,038,515 roubles. The nominal capital is 1,200,000 roubles, and there is a depreciation fund of 141,339 roubles.

Standard Enterprise.—*Baku* is informed that representatives of the Standard Oil Co. are, or were, recently at Baku, for the purpose of effecting the purchase of some oil properties there. After completing this deal they intended to proceed to Russian Turkestan to acquaint themselves with the oil fields in the Transcaspian and Ferghana provinces.

The Anglo-Russian Maximoff Co., Ltd., operating in Grosny, has in 1907, its seventh financial year, eaarned a profit of £76,869, practically the whole of which was written off for depreciation. The company has debtors for £73,677, and creditors for £13,600. The nominal capital is £400,000; the depreciation fund stands at £98,628.

A Remarkable Phenomenon has been observed, according to *Baku*, near Sangatchal station of the Transcaucasian Railway. On a hill not far from the station a crevice was formed on the 12th March, from which a broad stream of a thick crude petroleum flows continuously. The oil has now covered over the railway track for a considerable distance.

Deposits in Bessarabia.—The *Trade and Industry Gazette* is informed that the explorations carried out by the Kishineff Natural Science Society, in conjunction with the local Zemstvo and Mrs. Balaur, the owner of the supposed oil-bearing lands at Kornesht, in the province of Bessarabia, have proved the possibility of the existence of petroleum deposits in that locality.

In the Maikop Oil Field there is a new concern commencing operations, called the Baku-Black Sea Co., in the neighbourhood of the Shirvansky plot of Mrs. Selitrennikoff, where 140 feet was drilled by a hand drill and where a machine drilled well will be started shortly. The same company is also going to drill on a plot at Neftiannaia, adjoining another plot of Mrs. Selitrennikoff.

Crude Oil for the Railways.—A commission is to be appointed shortly consisting of representatives of various Government departments to elaborate the regulations under which the State railways shall receive the crude oil which the Government is taking from Baku as royalty in kind for the year ending 1st April, 1910. The quantity of crude oil to be so taken over has been fixed at 8,000,000 poods.

ROUMANIAN NOTES.

The Colombia Company has struck oil in its well No. 84, on the Puturosa plot in North Mislisora, with a yield of 30 tons per 24 hours. The total output of this plot now is 80 to 90 tons daily. The Nafta Co.'s well No. 2, in the same locality, is maintaining its yield at 20 tons daily.

New Wells.—Borehole No. 117 of the Steaua Romana at Bucea, in the Campina district, commenced to spout on the 6th inst., and threw up 1,400 tons of oil in the first 24 hours, and was still flowing at the time of writing. Well No. 154, also at Bucea, drilled by the Alliance Boring Co., has struck oil at 340 metres, with a yield of 10 tons per day.

Activity at Bordeni.—Well No. 1 of the Romano-American Co. at Bordeni has diminished its yield to eight tons daily. Mr. Ozinga's well No. 5 at Parshani, near Bordeni, is now being deepened in consequence of the strike of oil in well No. 1 of the Romano-American Co. Well No. 5 of Mr. Ozinga's, which struck oil in January, is now yielding six to seven tons per day.

Water Shut-off at Bustenari.—In consequence of the report made by Mr. N. I. Popescu, Government Inspector for Bustenari, to the effect that in the Calinet-Burloi wells eruptions frequently re-opened the water strata, a Commission of Government Mining Engineers and Geologists was appointed to investigate the methods employed for shutting-off water from boreholes, and to decide upon the best method to be adopted for the purpose.

An Important Privilege.—The Roumanian Petroleum Association has, at a recent meeting, decided to petition the Minister of Commerce to extend beyond the 31st March, 1909, the permission to import duty free one-half of the sulphuric acid consumed by the Roumanian petroleum refineries, the other half being obtainable from Roumanian manufacturers. There being no objection offered to this by the Roumanian acid manufacturers, the request will probably be granted.

Fuel Oil for Railways.—The Administration of Roumanian Railways has, on the 9th March, received tenders for the supplying of 200,000 tons of liquid fuel, to be delivered in three years. Offers were made by the Distribution Co. on behalf of the Steaua Romana, Romano-American, Aurora, Parascheva and Campeanu refineries, at 38 francs per ton in tank waggons at refinery. The Trajan Co.'s tender was 43 francs per ton at Cernavoda. The last contracts given out by the State railways were on the basis of 39 francs per ton.

The Reorganisation of the Aurora Company.—The news of the failure of the negotiations for the reorganisation of the Aurora Co. is confirmed, and, in fact, it is stated that Mr. P. Missir, representing the debenture holders, has given notice to the directors of the company of his intention to foreclose, and has also taken the necessary legal steps for that purpose. Mr. L. Witte, the general manager of the Aurora, has now gone to Berlin and Amsterdam to make a last effort to save the situation.

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LATEST QUOTATIONS OF PETROLEUM SHARES.

ENGLISH COMPANIES.

This list is restricted to companies who have paid dividends or who are producers.

Company.	Capital Paid Up.	Value of Shares.	Latest Prices
Assam Oil	£205,000	£1	17/0-18/0
Baku Russian Petroleum ..	£750,000 Ord.	£1	0/3-0/6
,, ,, ..	£650,000 5½% Pref.	£1	0/9-1/3
Bibi-Eybat Petroleum Co. ..			5/6-6/6
Californian Oilfields	£385,000 Ord.	£1	5⅓-5⅜
Commonwealth Oil Co. Pref	fully paid (Prem.)		⅜-½
,, ,, Def..	£1 fully paid		⅜-½
European Petroleum	£550,000 Pref.	£1	0/1½-0/4½
,, ,, ...	£550,000 Ord.	£1	0/1-0/2
,, ,, ...	£376,000 Deb.	£100	66-70
Russian Pet. & Liquid Fuel ..	£500,000 6½% Pref.	£1	2/6-3/6
,, ,, ...	£600,000 Ord.	£1	2/0-3/6
Schibaieff Petroleum ..	£575,000 6% Pref.	£5	$\frac{3}{16}$-$\frac{5}{16}$
,, ,, ...	£575,000 Ord.	£1	0/3-0/9
Shell Transport & Trading ..	£2,000,000	£1	54/6-55/6
,, ,, ,, ..	£1,000,000 Pref.	£10	10⅞-11
Spies Petroleum Company ..	£387,500	10s.	10/9 11/3

RUSSIAN COMPANIES.

Company.	Nom. Value in Roubles	Quotations on March 22nd Lowest Roubles.	Quotations on March 22nd Highest Roubles.
Baku Naphtha Co.	100	312	314
,, ,, ,, (issue of 1908) fully pd.	100	—	—
Balakhany Naphtha Co.	250	—	—
Caspian Society	1,000	3,725	3,775
Mazout Co.	250	—	—
Melikoff, A. C.	250	—	—
Mirzoeff Bros.	250	—	—
Naftalan Co.	250	—	—
Naphtha Co. "Kavkas"	250	—	—
Naphtha Trading Co., A. I. Mantacheff & Co.	250	126	128
Neft Co.	250	—	—
Nobel Bros.	5,000	10,425	10,500
,, ,, ...	250	—	—
Rops and Co. V...	250	—	—
Russian Naphtha Co.	250	—	—
Society Mazout	250	—	—
Ter-Akopoff Co.	250	—	—
Tumaieff & Co., J. G.	250	—	—
Volga-Caspian Naphtha and Trading Co	250	—	—
,, ,, ,, (Second Issue)	250	—	—

SCOTCH COMPANIES

Supplied by Messrs. Maclean and Henderson, Stirling.

Company.	Capital Paid Up	Value of Share	Latest Prices.
Broxburn Oil Co., Ltd., Ord. 17/- pd	£235,000	£1	£2 1s. 3d.
Do. 6% Cum. Pref. ..	£100,000	£10	£12 15s. 0d.
Burmah Oil, Ord.	£1,100,000	£1	£5 10s. 0d.
Do. Pref.	£250,000	£1	£12 2s 6d.
Dalmeny Oil Co., Ord. (7 paid) ..	£37,800	£8 10s	£4 0s. 0d.
Do. 5% Pref ..	£18,900	£7	£4 12s 0d.
Lobitos Oilfields, Ltd. (£1).. ..	£275,000	£1	£1 7s. 0d.
Oakbank Oil Co., Ltd., Ord.	£170,000	£1	£1 16s. 0d.
Do. Pref. (£1 paid)	£36,980	£1	£1 4s 6d.
Do. Do. (£1 paid)	£63,020	£1	£1 3s. 0d.
Pacific Oilfields, Ltd. (£1)	£200,000	£1	£1 5s. 6d.
Pumpherston Min. Oil Co., Ld., Ord. (17s. paid)	£110,500	17s.	£11 12s. 6d
Do. 6% Cum. Pref	£100,000	£10	£14 0s. 0d.
Tarbrax Oil Co., Ltd. Ord. (£1 pd.)	£38,350	£1	£2 15s. 6d.
Do. 6% Cum. Pref.	£35,000	£1	£1 5s 0d.
Young's Paraffin Co., Ltd., Ord. ..	£452,808	£4	£3 9s. 6d.
Do. "B" Deb...	£150,000	£100	£176 0s.

DUTCH COMPANIES.

Company.	Latest Quotations (per cent.)	Florins
Arnhemsche Petroleum Mij.	30	1,000
Aurora ,, ,, (Deb.5%)	68	—
Campina Poiana Mij.	—	—
Dordtsche Petroleum Mij. (Ord.)	149	—
,, ,, ,, (Pref.)	167	50
,, ,, ,, (Deb.4½%)	102¼	1,000
Gaboes ,, ,, ...	—	—
Holl. Rumeensche Petroleum Mij.	65	1,000
Int. Rum. Pet. Mij.	20	500
Java Petroleum Mij. (Ord.)	12	1,000
,, ,, ,, (Pref.)	37	—
Koninklyke Nederl. Pet. Mij. Shares	400½	100
,, ,, Share certificates	409¼	1,000
Mœara Enim Petroleum Mij.	179¼	100
,, ,, 1-1,000 Oblig. 5	—	250-1,000
"Moesi Ilir" Petroleum Mij.	—	—
Nederl.-Rumeensche Petroleum Mij.	4½	—
Nieuwe Ned. Petroleum Mij. And.	—	1,000
Oklahoma Petroleum Co.	116	—
Oliebronnen in Hannover Mij. (Deb.) ..	—	—
Panolan Maatschappij Cert.	235	—
Perlak Petrol. Mij. (6% cum.pr.A.)	130¼	1,000
,, ,, (Common)	—	—
Sumatra-Palembang Petroleum Mij	149⅛	500
Tarakan Petrol Mij.	27⅞	—
Zuid Perlak Petrol. Mij. (Pref.)..	140⅛	—

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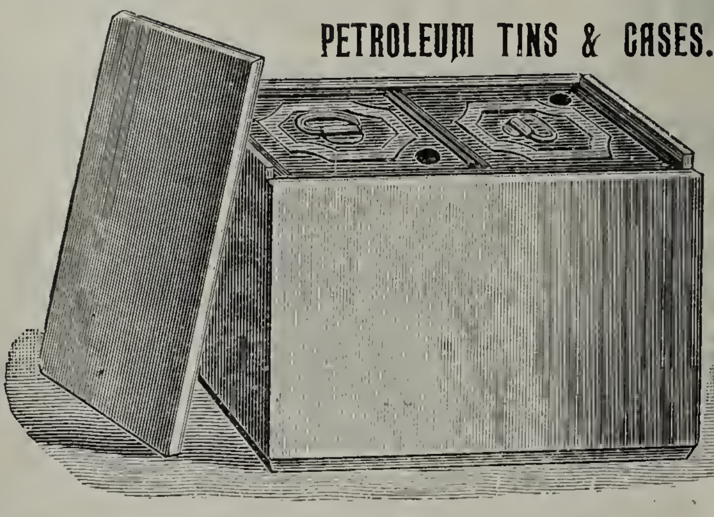

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PETROLEUM REVIEW,
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American Office: 150, Nassau Street, New York.

Saturday, March 27, 1909.

VICTORY OF THE STANDARD OIL COMPANY.

The long drawn-out fight of the Government of the United States against the Standard Oil Co. has abruptly terminated, and the decision which exonerates the greatest factor in the petroleum industry from all blame, will be hailed with satisfaction by all lovers of fair play and justice. If ever any Government has shewed open hostility to a great industrial concern, and done all in its power to threaten its very existence, it has been that set up by Mr. Roosevelt and his associates at Washington. For nearly three years the fight in the courts has been proceeding, but the blow now struck at those who have all along been responsible for the remarkable prosecution—we ought to say persecution – should for all time silence them, and render the path of commercial progress the less difficult to tread.

Readers of the Review will possibly still recollect the main features in this most famous case in oil history. The fight against the Standard Oil Co. was commenced in the August of 1906, when ten indictments for accepting rebates were returned by the Federal grand jury at Chicago. Demurrers to two of these indictments were sustained, but the others were overruled. While the case originated under District Attorney Morrison, he shortly afterward took up other work and the present district attorney was placed in charge. He selected for trial the indictment which charged that the Standard Oil Co. had accepted rebates from the Chicago and Alton Railroad, and to secure the testimony of the Department of Justice granted immunity to the officials of the road. Many of the counts in the indictment were struck out, and the case finally came to a hearing before Judge Kenesaw M. Landis in the early days of March, 1907. A verdict was rendered a month later, and the company fined $29,240,000, after the court sought to discover the relations between the Standard Oil Co., of Indiana, the company on trial, and the Standard Co., of New Jersey, generally known as the parent company. To ascertain this the court issued a subpoena to Mr. John D. Rockefeller and other officials of the New Jersey company, and now that the prosecution has lost its day, the remarkable fine of nearly thirty million dollars becomes, as we all believed it would, only an item in American jurisprudence.

The case was then taken to the Court of Appeals before Judges Grosscup, Seaman and Baker, in the Circuit Court of Appeals. The decisions reversing Judge Landis, in which the trial judge was mercilessly scored, was handed down last July. The Supreme Court refused to grant a petition for a writ of certiorari, and the case was therefore set for retrial, which was begun last month, and came to such a satisfactory end a few days ago.

The vehemence which the Government officials exhibited throughout the case against the Standard Oil Co. and the manner in which they endeavoured to convince the courts of the company's guilt, has caused—and quite rightly so—a feeling throughout oil producing circles of total condemnation of the tactics adopted by the United States Government. That it should be prompted by the spirit of self-aggrandisement to attempt to wreck a concern, the like of which is not to be found in any other branch of commerce throughout the world, is almost impossible of belief, yet events proved over and over again that such was the case. In fact, nothing could possibly strengthen our recently asserted contention that the United States Government at Washington is quite out of touch with the true spirit of the Americans, and likewise incapable of entering into that spirit of expansion of commerce and industry without which a Government becomes meaningless and worse than useless.

Now, however, the fight is over, and one can only express feelings of satisfaction at the result. The Standard leaves the American courts with a stainless record, and free to continue its important work for the petroleum industry at large, and for the over-seas expansion of the American petroleum trade in particular. But that the struggle in the courts has done an incalculable amount of harm to American industry and commerce is a fact which must be admitted upon all hands.

Prosecutions are not easily forgotten, and although exonerated from all suspicion of trickery, the Standard Oil Co. has, indeed, an uphill fight before the great supremacy of American petroleum can attain that position which it would undoubtedly have been in to-day, had not the several indictments been trumped up against it.

When I returned from America toward the end of last year, and gave my impressions of America's two great houses — the Government at Washington and the Standard Oil Co., of New York—the great fight between the Government and the company was still proceeding, and now in the light of later events—of the return of the Standard from the courts with the flying colours of success, and on the other hand, the complete and ignominous downfall of the prosecution from Washington—my words then published in the Review have to-day a peculiar weight. I pointed out that the attacks made against the great corporation could never be carried to a successful issue, simply for the very reason that the Standard Oil Co. is the embodiment of the industrial life of the whole American nation.

The position of the Captains of American industry is totally different from that of their brothers in Europe, for the former, unlike the latter, have to continually strain every nerve in order that they shall be able to furnish employment for that vast army of foreign workers which plants itself on American soil to the number of about one million yearly. The great industrial organisations of America must therefore be necessarily hustlers, always keeping in mind business extensions, for without these a most abnormal condition would immediately prevail throughout industrial America, as well as in Europe. The fact that European nations have not grudged the capturing of their markets for American goods is undoubtedly because it is now generally recognised that America has rendered Europe the greatest service by not only taking in its surplus army of workers, but finding them continuous and profitable employment.

In conclusion, let me say that I am sure my readers join me in the hope that we have seen the last of instances where Governments set themselves strong against the great industrial concerns of their own countries. Success nowadays is at the best very difficult to achieve, and with a Government which aims to destroy rather than to support and build up, it is impossible of realisation. If every Government would first recollect this one simple fact, then it would serve a noble purpose and materially assist in strengthening the bonds of international industry and commerce.

P. Dvorkovitz.

* * *

Honour to Mr. A. M. Feigl.—At the recent meeting of the Baku Petroleum Association, a resolution was passed to elect Mr. Arnold Michailovitch Feigl, late president of the council of the association, an honorary member of the council, and to found a scholarship of 500 roubles in his name at the Commercial School at Baku.

ANALYSIS OF GALICIAN CRUDE OIL.

By MR. A. GUISELIN, in the "Moniteur du Petrole Roumain."

Mr. Guiselin recently had submitted to him a sample of crude oil which was stated to be of the average quality of Galician crude oil. It was viscous, and contained a large quantity of water in suspension, which water could not be eliminated by standing.

The oil was put into a cast-iron retort, and heated very slowly, when it soon commenced to give off vapours having a strong toluene odour; then water charged with spirit began to distil over in a very irregular manner, causing the mass of the oil to boil violently.

After 30 per cent. of the crude oil had gone over, the distillation became more regular, and was carried on very easily right up to the twelfth fraction. At that point the fire had to be increased, and the fractions which distilled over after that were strongly coloured, and had the odour characteristic of the products of the decomposition of petroleum. The distillation was stopped at the nineteenth fraction. The results obtained by the distillation are given in the following table:

The quantity of crude oil taken for distillation was 20 litres, and the fractions were taken off at $\frac{1}{20}$ by volume.

No. of fraction.	Volume of oil distilled over. in c.c.	Percentage of water distilled over.	Percentage of oil d stilled over.	Boiling Point.	Specific Gravity.
1	200	1·0	4·0	Temperatures shewn by thermometer were very varying.—to 215° C.	0·742
2	145	2·1	2·9		0·764
3	125	2·5	2·5		0·772
4	100	3·0	2·0		0·778
5	105	2·9	2·1		0·783
6	230	0·4	4·6		0·795
		11·9			
7	250	—	5·0	215 to 238° C.	0·807
8	250	—	5·0	238 to 260° C	0·8195
9	250	—	5·0	260 to 280° C.	0·8305
10	250	—	5·0	280 to 295° C.	0·8385
11	250	—	5·0	295 to 306° C.	0·0425
12	250	—	5·0	306 to 306° C.	0·8415
13	250	—	5·0	306 to 310° C.	0·843
14	250	—	5·0	Temperatures shewn by thermometer were very varying	0·8305
15	250	—	5·0		0·860
16	250	—	5·0		0·850
17	250	—	5·0		0·856
18	250	—	5·0		0·856
19	250	—	5·0		0·893
20	Residues left in still.				

According to the French system, the inflammable heavy oils, namely, fractions 11 to 20, were put into a retort, and distilled slowly. The results are given below, and shew that the heavy fractions of Galician oils crack with difficulty.

DISTILLATION OF THE HEAVY OILS IN FRACTIONS OF 250 C.C CORRESPONDING TO FIVE PER CENT. OF THE CRUDE OIL.

No. of fraction.	Volume in c.c	Per Cent.	Boiling Point.	Specific Gravity.	Flash Point.
11 bis	250	5	— to 220	0·782	—
12 ,,	250	5	220 to 270	0·826	60°
13 ,,	250	5	270 to 300	0·846	105
14 ,,	250	5	300 to 310	0·854	120
15 ,,	250	5	310 to 334	0·859	123
16 ,,	250	5	334 to 345	0·865	150
17 ,,	250	5	345 to 360	0·869	155
18 ,,	250	5	360 to 380	0·877	160
19 ,,	180	3·6	380 to —	—	—

On opening the retort, 150 grammes of coke were found; the total loss for the two distillations was 3·4 per cent.

REDISTILLATION OF THE BENZINE FRACTIONS.

Fractions 1, 2, 3, 4, 5 and 11 bis were redistilled, with the following results:—

Boiling Point. Degs. C.	Percentage.	Specific Gravity
Up to 115	7	0·742
115 to 125	15·6	0·748
125 to 140	21·8	0·761
140 to 175	27·4	0·773
175 to 200	8·6	0·790
200 to 250	8·2	0·821
Residue at 250	10·8	—

The first three fractions mixed together make 45 per cent. of benzine of a specific gravity of 0·752. The last three fractions mixed together constitute 44·2 per cent. of illuminating oil of a specific gravity of 0·785.

By mixing together fractions 7, 8, 9 and 10, representing 24·6 of the crude oil, with fractions 12^b, 13^b, 14^b and 15^b, representing 20 per cent. of the crude and the illuminating oil fractions obtained by the redistillation of the benzine fractions, a distillate was obtained representing 54·75 per per cent. of the crude, and which by refining with 5 per cent. sulphuric acid was turned into a standard white kerosene of a specific gravity of 0·822 and a flashpoint of 48°. The loss in refining was 1·35 per cent. in the acid treatment and 1·1 per cent. in the soda treatment. This refined oil tested in lamps with round French burners shewed a rather mediocre burning quality, very much like the burning results obtained from the Galician illuminating oils introduced by the Galician refiners into the east of France.

The heavy oils constituting fractions 16^b, 17^b, 18^b and 19^b have a deep colour and strong smell; they are very rich in paraffin. By filtering this oil at 22° C. and rapid pressure between several layers of filter paper, 50 grammes of paraffin scale was obtained with a melting point of 54° C. before refining, and 56° C. after being washed with cold benzine and treated with sulphuric acid. The extraction by such simple method of a quantity of paraffin equal to 1 per cent. of the crude oil abundantly proves the richness of the crude oil in paraffin.

If the distillation were stopped at the 18th fraction, there would have been left 10 per cent. of a plastic pitch, but when pushed on till dry coke, as is done in France, there was obtained at the end of the redistillation of the heavy oils, 150 grammes of coke, representing 3 per cent. of the volume of the crude oil.

Summarising the results of all the above operations, we find that the ultimate products obtained by the treatment of the crude oil were:—

	Per Cent. by Volume.
Refined heavy benztne, boiling between 100 and 140° C.	8·10
Refined lamp oil of specific gravity 0·823 and flash point 48° C., equal to an inferior French lamp oil	52·35
Gas oil containing 5 per cent. paraffin, at 22° C.	18·60
Coke	3·00
Loss in distilling	3·40
Loss in refining	2·65
Water	11·90
	100·co

These results shew that even when if freed from the water which it contains, Galician crude oil cannot advantageously compete in France with the various crude oils and distillates which contain high-class benzines and illuminating oils.

In France, benzine and high-class illuminating oils (the latter called "petrole de luxe") are the only two products, the sale of which is remunerative, and it is just these two products that Galician oil lacks. The author nevertheless admits that the very low prices which have lately been ruling for Galician crude oil might render advisable an experiment on an industrial scale, to extract at least the illuminating oil contained in it, if the French customs tariff were more accessible, and if transport in tank waggons were less expensive.

AMERICAN PARAFFIN WAX EXPORTS DURING 1908.

The exports of paraffin wax from America during December and for the year 1908 are given in the following table, the quantities being given in pounds. For the purpose of comparison the total exports for the two previous years are also given :—

EXPORTS DURING DECEMBER.

Exported to—	1907.	1908.
United Kingdom..	9,648,422	8,417,990
Belgium	192,093	—
France	56,675	45,483
Germany	706,993	343,375
Italy	924,912	418,084
Netherlands	13,786	301,464
Other European Countries ..	344,513	263,808
Central American States and British Honduras	112,329	100,991
Mexico	1,014,042	1,496,950
South America	67,199	21,696
Japan	670,714	999,616
British Australasia	240,787	125,527
Other Asia and Oceanica ..	301,868	25,181
British Africa	275,028	184,779
All Other African Countries ..	2,751	—
Other Countries	3,347	12,573

EXPORTS FOR TWELVE MONTHS.

Exported to—	1906.	1907.	1908.
United Kingdom ..	98,307,477	107,699,672	85,868,311
Belgium	620,469	1,185,238	405,783
France	879,120	923,041	383,408
Germany	12,768,494	11,909,435	4,254.149
Italy	15,698,922	21,542,593	6,160,813
Netherlands	6,655,066	7,602,889	2,936,541
Other European Countries	5,909,306	6,428.877	4,329,389
Central American States and British Honduras	1,045,362	1,265,411	1,352,884
Mexico	10,111,741	12,706,881	12,543,307
South America	660.070	866,045	450,945
Japan	9,904,558	14,111,239	7,805 949
British Australasia ..	5,082,524	4,805,166	2,346,884
Other Asia and Oceanica	2,054,749	4,293,431	6,587,856
All other African Countries	1,729,864	5,113,056	1,622,217
British Africa	2,004,753	7,003,211	4,478,338
Other Countries ..	71,839	48,309	140,636

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GROSNY PRODUCTION DURING DECEMBER.

According to the official statistics prepared by the Grosny Petroleum Association, the total production of crude oil at the Grosny oil fields during December amounted to 3,748,062 poods, of which 562,540 poods were obtained from spouters.

The production of the various firms during the month was as under :—

	Total Production. Poods.	Production from Spouters. Poods.
Akhverdoff Co.	1,526,300	274,000
Spies Petroleum Co., Ltd. ..	780,930	60,890
Executors of Maximoff ..	476,900	100,000
Anglo-Russian Maximoff Co., Ltd.	279,000	—
Kasbeck Syndicate, Ltd. ..	260,840	106,750
North Caucasian Oilfields, Ltd.	157,080	20,900
Russian Standard	83,350	—
Tcheleken-Daghestan Co. ..	75,440	—
Moscow Naphtha Co. ..	42,030	—
MacGarvey	25,934	—
Caspian and Black Sea Society	20,658	—
St. Petersburg Co.	18,600	—
Kholodovsky	1,000	—

The number of wells in exploitation during the month was 172. The number of wells which were in drilling throughout the month was 42, and the amount of drilling work done was 3,614 feet.

BATOUM PETROLEUM SHIPMENTS.

The following were the shipments of petroleum products from Batoum during the week ended February 14th, o.s. (in poods) :—

	Illuminating Oil.		Other Products.	
	1908.	1909.	1908.	1909.
To Europe ..	432,000	1,158,000	302,000	231,000
To the East ..	658,000	91,000	—	44,000
To Russian Ports.	113,000	4,000	1,000	3,000
From 1st Jan. to 14th Feb. :—				
To Europe ..	2,303,000	5,522,000	1,291,000	1,645,000
,, the East ..	2,370,000	366,000	2,000	43,000
,, Russian Ports.	790,000	715,000	5,000	10,000

The shipments of residuals to Europe during the week ended 14th February, 1908, amounted to 80,000 poods, and in 1909 57.000 poods; and to Europe from 1st January to 14th February (o.s.) amounted to 121,000 poods in 1908 and 678,000 poods in 1909.

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ROUMANIAN PETROLEUM PRODUCTION IN JANUARY.

The production of crude oil at the Roumanian oil fields in January, according to the provisional statistics published by the *Moniteur du Petrole Roumain*, amounted to 87,086 tons. The final figure, when completed by the output of some firms, will probably be about 90,000 tons against 93,571 tons produced in December.

The production of the various fields in January and December was :—

	Jan. Tons.	Dec. Tons.
Prahova District—		
Bustenari-Calinet-Burloi	33,605	37,479
Campina-Poiana	18,565	16,494
Moreni	23,842	29,924
Baicoi-Tintea	4,545	3,744
Other Fields	729	667
Total for Prahova District ..	81,286	88,308
Dambovitza District	2,574	2,563
Buzeu District	1,741	1,369
Bacau District	1,485	1,331
Total	87,086	93,571

The production of the leading firms during the month, compared to December, was as under :—

	Jan. Tons.	Dec. Tons.
Steaua Romana	25,784	26,930
Regatul Roman	16,024	13,676
Concordia Co.	12,112	13,262
Romano-American Co.	8,220	9,221
Astra Co.	4,063	7,007
Trajan Co.	3,102	3,026
International Co.	2,542	2,940
Colombia Co.	2,748	2,211
Aquila Franco-Romana	1,696	1,809
Nafta Co.	1,609	1,648
Seceleanu Bros.	1,444	941
I. Koster	1,270	670
A. Van de Werk	—	1,060
Anglo-Roumanian Petroleum Co. ..	742	777
Alpha Co.	738	450
Arnheemsche Petroleum Co. .	596	626
Olandeza-Romana	613	610

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In *South Mislisora*.—Well No. 286 of the Concordia Co. at Bodiceni, in South Mislisora, has lately increased its yield, which now amounts to 60 tons daily. Well No. 149 of the Steaua Romana, at a spot called Macinca, has from the 28th February to the 6th March been making violent eruptions, throwing up sand and stones, some weighing 15 kgrs. each, to a height of 20 metres. The yield of oil from this well is 70 to 80 tons per day. It is feared that the violence of the eruption may have caused damage to the borehole.

GERMAN PETROLEUM DURING JANUARY.

The following were the imports of petroleum products into Germany during January, 1909:—

	Tons.
Illuminating Oil	157,635
Lubricating Oil	17,414
Benzine	11,879
Gas Oil	2,228
Crude Oil	766
Residuals	29
Patent Turpentine and Other Mixtures ..	23
Total	189,974

The imports of petroleum products from the various petroleum producing countries during January were:—

	Tons.
U.S.A.	132,551
Austria-Hungary	31,518
Russia	14,353
Dutch India	9,342
Roumania	1,836
Other Countries or of unknown origin ..	9,374
Total	189,974

The exports of petroleum products from Germany in January were:—Lubricating oils, 864 tons; residuals, 28 tons; illuminating oil, 33 tons; benzine, 475 tons; total, 1,400 tons.

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THE ROUMANIAN PETROLEUM REFINERIES.

OPERATIONS DURING JANUARY.

The quantity of crude oil treated by the Roumanian refineries in January amounted to 79,478 tons. The output of products was as under:—

	Tons.
Benzine	15,529
Illuminating oil	19,147
Lubricating oil	4,654
Residuals	38,449
Total	77,779

The quantity of petroleum products delivered from the refineries in January for home consumption were:—

	Tons.
Benzine	1,014
Illuminating oil	4,372
Lubricating oils	1,148
Residuals	30,815
Total	37,349

In addition, a quantity of 10,419 tons of residuals was used as fuel at the refineries.

The stocks of various petroleum products at the end of January were:—

	Tons.
Benzine	46,575
Illuminating oil	38,587
Lubricating oil	21,046
Residuals	48,518
Total	154,726

The output of paraffin scale in January was 63·4 tons; deliveries for home consumption, 62 tons; stocks on 31st January, 58·8 tons.

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To Whom Does the Oil Belong?—The Baku Petroleum Association has been for many years past, and still is receiving a large part of its revenue from the sale of crude oil collected in the drainage ditches in the oil fields. The Government now seems to be inclined to question the right of the Petroleum Association to do that, and at the instance of the Viceroy of the Caucasus, the question has been discussed by the Bureau on Petroleum Affairs at Baku, and it was decided to ascertain how long the Association has been collecting this oil, what revenue it has been deriving from this source, and which Government department authorised the Association to do so.

PRODUCTION OF ENGLISH COMPANIES IN RUSSIA.

Baku Russian Petroleum Co., Ltd.—The production for the week ended 13th March was 195,650 poods, or 3,154 tons; and for the week ended 20th March was 195,600 poods, or 3,153 tons.

Russian Petroleum and Liquid Fuel Co., Ltd.—The production for the week ended 13th March was 202,000 poods, or 3,257 tons; and for the week ended 20th March was 196,000 poods, or 3,160 tons.

Spies Petroleum Co., Ltd.—The production for the week ended 14th March was 278,350 poods, or 4,489 tons. The total production for year to 14th March was 2,234,500 poods, or about 36,040 tons. The total production for the corresponding period last year was 2,151,495 poods, or 34,701 tons. The output for the week ended 21st March was 249,480 poods, or 4,024 tons. The total production for year to 21st March was 2,483,980 poods, or about 40,064 tons. The total production for the corresponding period last year was 2,512,260 poods, or about 40,520 tons.

The European Petroleum Co., Ltd.—The production for the week ended 14th March was 135,777 poods, or 2,189 tons; and for the week ended 21st March was 136,865 poods, or 2,207 tons.

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THE INDIAN PETROLEUM MARKET.

(*Crowded out of page* 205.)

Bombay, Mar. 5th.

The petroleum market is strong. The following are the current prices of the Standard Oil Co. of New York:

		Rs.	a.	p.
Snowflake Brand, 150 deg., American	(per case)	6	4	2
White Rose, 150 deg. ,,	,,	6	4	2
Chester Brand, 76 deg. Abel	,,	4	12	2
Devoe's Brilliant	,,	4	12	2
Monkey Brand, 76 deg. Abel	,,	4	2	2
Elephant Brand, 125 deg. (bulk in tins)	(per 2 tins)	3	4	0
Elephant Brand, 125 deg. (bulk without tins) (per 8 Imperial gallons)		2	4	0

The following are the current prices of the Asiatic Petroleum Co., Ltd.:—

		Rs.	a.	p.
Swan Brand, bulk loose	(per unit)	1	11	0
Swan Brand, new tins	(per pair)	2	5	0
Ship Brand, bulk loose	(per unit)	2	0	0
Ship Brand, new tins	(per pair)	2	10	0
Rising Sun Brand, bulk loose	,,	2	2	0
Rising Sun Brand, new tins	,,	2	12	0
Anchor Cases	(per case)	4	2	0
Silver Light 150 deg. cases, ...	(per case)	5	4	0

The prices of the Burma Oil Co.'s productions are as under:—

		Rs.	a.	p.
Kerosene, Victoria	(per 2 tins)	3	8	0
Kerosene, Victoria	(per 8 gallons)	2	14	0
Kerosene, Chukker	(per 2 tins)	3	15	0
Kerosene, Chukker	(per 8 gallons)	3	5	0
Burmah Wax	(per pound)	0	4	0
Burmah Candles	,,	0	5	6

RAILWAY TANK WAGONS
Of every type for Cash, Purchased, Lease or Hire.
ROLLING STOCK OF EVERY CONCEIVABLE KIND,
STEEL STORAGE TANKS, ETC.
W. R. RENSHAW & CO., Ltd.,
PHOENIX WORKS, STOKE-ON-TRENT.
P.A.B.

THE PETROLEUM TRADE IN BELGIUM.

Some interesting details are given from a correspondent in the latest issue of the *Moniteur du Petrole Roumain*, regarding the petroleum trade in Belgium.

Statistics prove the importance of Belgium as a market for petroleum products. Up to 1883 American oils were the only ones imported into Belgium, but from that year onwards Russian oil began to enter the Belgian market, at first very timidly, but later on, from 1886, in more considerable quantities. In 1892 America imported 97,769 tons, and Russia 43,108 tons, which shews that after a hard struggle Russian oil has acquired a large proportion of the Belgian market. At that time the sale of Russian oil was carried on with the greatest energy by Messrs. H. Rieth and Co., which was the only distributing firm in competition with the American Petroleum Co., which sells the oils of the Standard Oil Co. of New York. Beginning from 1893 the imports of Russian oils were declining until they came down to 9,112 tons in 1897, and during the period from 1893 to 1902 they did not exceed a quarter of the American imports.

In 1903, in addition to three existing petroleum distributing companies, namely, the American Petroleum Co., the Société Anonyme pour la vente du Petrole, ci-devant H. Rieth and Co., and the Ghent Petroleum Co., who maintained almost identical prices, and divided the market among themselves, a fresh importing firm appeared on the Belgian market in the shape of the Shell Transport and Trading Co. of London, which imported oils of various origins.

The Petroleum Producte Actiengesellschaft, affiliated to the Shell Co. two years later, took the place of the latter, and it was then that the imports of Roumanian oil assumed important dimensions, having in 1906 reached 22,845 tons. During this period, notwithstanding the keen competition between the American Petroleum Co., Messrs. H. Rieth and Co., and the Ghent Petroleum Co., selling prices in Belgium remained remunerative.

In 1907 came about the formation of the European Petroleum Union, which absorbed the Petroleum Producte Actiengesellschaft, and came to an understanding with the Standard Oil Co. Since then the European Petroleum Union, whose selling organisation is the Deutsche Petroleum Verkaufs Gesellschaft has altogether ceased to supply oil to Belgian consumers, and has entirely disappeared as a distributor from the Belgian market.

At present the distribution of illuminating oil in Belgium is carried on by the following companies:—The American Petroleum Co., the Société Anonyme ci-devant H. Rieth and Co., the Ghent Petroleum Co., the National White Oil Co. (which sells only limited quantities), and the Actiengesellschaft füer Oesterreichische und Ungarische Mineraloelproducte, which sells Austrian oil.

The official quotation for illuminating oil during the whole of 1908 and in January, 1909, remained unchanged at 22 francs per 100 kilos., delivered into tank waggons at Antwerp.

The imports of petroleum products into Belgium from the various producing countries during the last ten years were:—

Year.	U.S.A. Tons.	Russia. Tons.	Austria-Hungary. Tons.	Roumania. Tons.	Other Countries. Tons.	Total. Tons.
1899 ..	137,749	28,829	—	—	274	166,852
1900 ..	122,436	30,013	—	—	926	153,375
1901 ..	127,901	31,575	59	—	1,289	160,824
1902 ..	143,085	39,706	308	98	972	184,169
1903 ..	157,129	50,071	653	79	4,155	212,086
1904 ..	129,362	49,681	1,266	—	13,707	194,016
1905 ..	141,398	45,483	300	3,000	5,481	195,662
1906 ..	145,099	24,289	—	22,845	5,523	197,756
1907 ..	137,162	23,284	1,254	44,067	5,877	211,644
1908 ..	159,569	22,394	4,307	19,722	8,293	214,285

The distribution of benzine is now carried on in Belgium by the following three firms:—

The American Petroleum Co., whose principal storage installation for benzine is in Antwerp, and which is the oldest benzine distributor in the country.

The Société Anonyme de Petroles de Grosnyi, which has only begun selling benzine in 1908, and which is now building a refinery and tanks at Gand-Terdonck.

The Belgian Benzine Co. at Haeren, near Brussels, formed in 1908 by the three principal buyers of benzine from the Asiatic Petroleum Co., this concern increasing the capacity of its storage installation at Haeren.

The struggle which is now in progress in the European benzine trade between the Standard Oil Co. and the Asiatic Petroleum Co. has also extended to Belgium, where the position has been further aggravated by the appearance on the market of the Société Anonyme de Petroles de Grosnyi. As a result of this struggle, the prices of all grades of benzine and gasolenes have come down by about one-third, and that of motor spirit has declined by half.

In 1908 it was expected that a Roumanian company would also come on the Belgian market as a distributor of benzine; but the company in question has apparently held back, either considering the moment inopportune for the contemplated step or preferring to bring its product on the Belgian market through the medium of the existing distributing organisation, and thus dispense with the need of creating installations, the initial cost and upkeep of which might prove disproportionate to the trade to be done in benzine in Belgium, where the consumption of benzine in proportion to population is only one-half that of Germany.

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GOLD COAST OIL AND BITUMEN CORPORATION.

Sir Ralph Moore, presiding at the meeting of the Gold Coast Oil and Bitumen Corporation, held in London a few days ago, said the Apollonia Concession was now practically transferred to the company, and the committee had allotted the purchase shares, while arrangements had been made with the Société Francaise de Petrole for the management of the property. They would thus have the advantage of all the experience which that company had obtained by the expenditure of a very large sum of money. The board was considering a proposal to amalgamate with the Société Francaise de Petrole and the Gold Coast Oil and Fuel Co.; but nothing had yet been decided. If the scheme went through it would lead to great economies, as the three properties would be worked jointly instead of individually.

The PETROLEUM INDUSTRY OF MEXICO DURING 1908.

A REVIEW OF EVENTS, REPRINTED FROM THE "OIL, PAINT AND DRUG REPORTER."

(*Continued from page 172.*)

The competition that has developed in oil production in this country during the last year has caused the Mexican Petroleum Co. to become active in adding to its landed holdings, not only in the vicinity of its original tract, but in other parts of the country where the possibilities of oil development are thought to be good. The company also obtained a concession from the Mexican Government several months ago to build a pipe line from its Ebano field to the City of Mexico. This proposed pipe line will be about 500 miles long and will involve in its construction some extraordinary features. It will have to mount to the summit of the great central plateau from sea level. This plateau has an altitude of 8,000 to 10,000 feet. The expense of constructing this pipe line will be heavy on account of the large number of pumping stations that will be required to lift the oil to the height which will be required in order to carry it to the City of Mexico. It is said, however, that the construction of the line is entirely feasible. There is some speculation as to the object of building an oil pipe line to the City of Mexico. According to one report the company will erect a large oil refinery in the capital. It is also said that it is preparing to enter the crude oil market on a big scale, and that the City of Mexico will be used as the central distributing point of the product. The company is also said to have in contemplation the establishment of a gas plant in the City of Mexico, and a part of its crude product will be used to manufacture the illuminating commodity.

A subsidiary concern of the Mexican Petroleum Co. uses the asphaltum which comes from the refinery as a by-product in street paving. This auxiliary company has paved many of the streets of the City of Mexico and Guadalajara with this product.

Second in years of service in developing the oil resources of Mexico, and probably holding first position in quantity of production, is Messrs. S. Pearson and Son, Ltd., the British firm of contractors who are known the world over for the great harbour and port improvements which they have made for different countries, particularly in Mexico. This firm occupies an interesting position in the oil industry just now on account of the strong competition which it is waging against the Waters-Pierce Oil Co. for control of the refined oil trade of Mexico. Not only is this firm seeking to compete with the leading interests in that country but it is exporting refined oils to England and is said to have its plans made for building up a trade in several European and South American countries. It is certainly the most active oil operator in the Mexican fields to-day. It conducted its operations so quietly that few people were aware of the strong position it occupied in the oil industry until it had entered upon its campaign of competition. The firm's entry to the oil producing and refining business is said to have been quite by accident. It has been operating the National Tehuantepec Railroad under lease from the Government for several years. It also had the contracts for improving the harbours and establishing modern port facilities at Coatzacoalcos and Salina Cruz, the Atlantic and Pacific terminus, respectively, of the National Tehuantepec line. It was while employed in this work that the firm became aware of the oil indications near Minitatlan, situated only a few miles from Coatzacoalcos. Prospect wells were bored and splendid flows of oil obtained. The field was steadily developed, and about two years ago a large refining plant was erected at Minitatlan. Pipe lines were also built and the operations extended in various directions. In order that its product may be distributed by water as well as by land the firm had purchased a fleet of oil tank boats. Its number of wells in the Minitatlan field is being constantly augmented. The refinery is in regular operation and the business is growing rapidly. The storage facilities of the firm are large. In addition to the tanks already at Minitatlan, other tanks are to be built at various points in the republic.

This firm has more oil land holdings than any other concern in Mexico. These holdings are scattered all along the coastal territory as well as in the plateau region. The efforts of the firm are just now being devoted primarily to exploiting its lands in the territory adjacent to the Gulf coast. It has drilling outfits at work in the States of Tabasco, Chiapas, Vera Cruz and Tamaulipas. It has met with marked success in some of these prospect wells. This is particularly the case in the Tampico territory.

The most sensational event in the history of the oil industry of Mexico was the bringing in of the great gusher at Dos Bocas, situated near the San Geronimo River, in the State of Vera Cruz. The subsequent happenings in connection with this remarkable well has made it known in oil circles throughout the world. This gusher was brought in on July 4 of last year. The gas and oil which poured from it were ignited from the fire under the boiler of the boring rig, and an explosion followed which gradually converted the well into a seething, burning volcano of oil. The fire was extinguished after it had burned for two months. The crater of the phenomenal well continued to enlarge, however, after the fire was extinguished, and the geyser of boiling water and oil now covers an area of more than twenty-five acres. An enormous quantity of oil was consumed by the fire, the loss aggregating several million barrels, it is estimated. According to the opinion of experts who visited the scene and made calculations as to the flow of the well, it was producing at one period in its eventful career as much as 150,000 barrels a day. Following the quenching of the flames the boiling salt water largely smothered the oil, and the geyser is now said to be producing about 5,000 barrels of oil daily. This output is now being saved by means of a ditch or spillway. It is worthless as an illuminant, it is stated, on account of the heat of about 165° F. to which it is subjected in the cauldron whence it comes. It is being utilised, however, for its asphalt qualities.

The wonderful well at Dos Bocas, while it has not proved profitable in itself, has served to attract wide attention to the oil producing possibilities of the Tampico region, and has stimulated oil development on the part of a number of large concerns. The land upon which the Dos Bocas gusher is situated was originally leased by the Pennsylvania Oil Co. for a nominal sum. In the first well which that company bored upon that property a good flow of oil was obtained. Just about the time the wonderful gusher was brought in Messrs. S. Pearson and Son, Ltd., purchased all of the Pennsylvania Oil Co.'s holdings with the exception of a very small interest. The development of the Dos Bocas tract as well as other land in the Tampico territory, controlled by S. Pearson and Son, Ltd., is being actively carried on by that firm. It is quite generally reported in well-informed oil circles of Mexico that it is planned by this firm to install a large refinery at Tampico or some point in that region as soon as its oil production warrants the enlargement of its business in this direction. A system of pipe lines is also planned. In addition to the large amount of development work which this firm is doing in the Minitatlan and Tampico sections it is exploiting the San Cristobal district, State of Chiapas. It has brought in a number of wells there, but they are small producers. The Tuxpam territory, situated about mid-way between Tampico and Vera Cruz, is also receiving the attention of Messrs. S. Pearson and Son, Ltd., as well as of other oil producing concerns.

The existence of oil in paying quantities at Furbero, situated about 30 miles from Tuxpam, has been known for several years. Mexico Oil Fields, Ltd., exploited that field with a considerable degree of success, but owing to the lack of transportation facilities the work of development was retarded. It is reported that Messrs. S. Pearson and Son, Ltd., have acquired extensive holdings in that district, and that it is to be thoroughly exploited by them. At any rate, the present output of the wells there is sufficient to warrant the building of a railroad and oil pipe line from Furbero to the port of Tuxpam. These two transportation lines will soon be finished. They are being financed by S. Pearson and Son, Ltd. This firm is also wildcatting in Los Esteros district, State of Tamaulipas.

The territory situated on the San Geronimo river, opposite the phenomenal well at Dos Bocas, is being exploited by a syndicate of California men, headed by Mr. Doheny, president of the Mexican Petroleum Co. This syndicate have bored several wells, obtaining good flows of oil.

There are a number of other concerns which are doing prospecting work in various other localities of Mexico, and it is not improbable that during the course of the present year some of these may become producers of oil. Many rumours are heard as to the entry of the Standard Oil Co. to the oil producing field of that country, but there seems to be little basis for most of these reports. The Waters-Pierce branch of the Standard Oil Co. operates a refinery at Tampico. Its plant at that place has been greatly enlarged recently, more than 3,000,000 dollars having been expended in these improvements. This company has heretofore been obtaining its crude oil supply from the United States, refining same for its Mexico trade at its Tampico plant. It will hereafter receive its crude oil supply, at least a good portion of it, from domestic producers, the Mexican Petroleum Co. having contracted part of its production to the former concern, it is reported. The Waters-Pierce Oil Co. also owns small refineries st Vera Cruz and the City of Mexico, but these two have been out of commission for some time.

The report which recently obtained currency to the effect that E. H. Harriman, the New York railroad magnate, was about to enter the oil producing field of Mexico lacks confirmation. It probably grew out of the fact that E. T. Dumble, consulting engineer of the Southern Pacific, recently made an exhaustive examination of the territory both above and below Tampico, with the view of learning its oil producing possibilities. A. H. McKay, of the City of Mexico, president of the Mercantile Bank of that city, and personal representative of Mr. Harriman in Mexico, is at the head of a syndicate which has acquired oil land holdings in different parts of the country. Whether he is acting for himself or as the representative of Mr. Harriman in making these investments is a matter of conjecture in the absence of any authoritative information on the subject.

It is in the plateau region of Mexico, adjacent to the Sierra Madre range, that encouraging discoveries of light crude oil have been made. Prospect wells which were bored in the northern part of the State of Chihuahua, upon lands owned by James R. Keene and W. R. Hearst, of New York, and Governor Enrique Creel, of Chiahuahua, developed oil in small quantities. The indications are considered so favourable that other exploitation is being conducted in that region. These wells are situated near the Rio Grande and a short distance from the Conchos River. Further west, in the same State, upon lands owned by General Luis Terrazas, oil indications have been found and a syndicate of Americans, headed by J. S. Cullinan, president of the Texas Co., have obtained an oil lease on about 8,000,000 acres of the Terrazas holdings.

CLASSIFIED IMPORTS INTO UNITED KINGDOM UP TO MARCH 22nd, 1909.

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IN GALLONS.

Country.	Illuminating.		Lubricating.		Residuals.		Gas Oil. (Solar)		Benzine.		Fuel Oil.		Other Descriptions.		Totals.	
	Since Mar. 8	From Jan. 1.	Since Mar. 8.	From Jan. 1.	Since Mar 8.	From Jan. 1.	Since Mar. 8.	From Jan. 1.	Since Mar. 8.	From Jan. 1.	Since Mar. 8.	From Jan. 1.	Since Mar. 8.	From Jan. 1.	Since Mar. 8.	From Jan. 1.
Austria ...	—	—	—	24,930	18,920	139,730	—	—	—	—	—	—	—	—	18,920	164,660
Belgium ...	—	70	30,980	160,560	—	—	—	—	—	—	—	—	—	—	30,980	160,630
Canada ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dutch India.	—	400	—	—	—	—	—	—	—	5,661,890	—	80	—	80	—	5,662,450
Germany ...	29,630	194,930	51,320	232,870	2,000	2,000	—	—	—	—	—	—	—	4,640	82,950	434,440
Holland ...	—	300	.500	1,460	—	—	—	—	801,500	1,087,710	—	—	2.720	13,800	804,720	1,103,270
Roumania ...	—	3,605,450	—	—	—	—	—	2,191,800	—	938,360	—	—	—	—	—	6,735,610
Russia ...	1,851,400	5,585,960	8,240	413.590	—	—	—	—	—	886,540	—	—	1,090	60,620	1,860,730	6,887,180
U.S.A. ...	10,378,680	32,472,370	1,327,760	10,334.500	—	23,600	1,353,010	12,952,990	1,831,030	5.320,240	1,645 380	3 000,460	1,130	1,173,660	16,536,990	65.337,350
Other Countries	—	—	470	9,520	--	—	—	1,000	—	887,380	—	240	600	1,600	1,070	899,740
	12,259,710	41,859,480	1,419,270	11,177,430	20,920	165,330	1,353,010	15,145,790	2,632,530	14 782,120	1,645,380	3,000 780	5,540	1,254,400	19,336,360	87,385 380

THE PROPERTIES OF JAPANESE PETROLEUM.

The article here published was written by Mr K. Kobayashi, a prominent oil chemist now associated with the Hoden Oil Co., of Echigo, Japan, with the assistance of Mr. H N. Cooper, of Berkley, Cal., Prof. T. Takamatsu, Prof. Y. Kawakita, Mr. M. Tsuzimoto, Chemist at the Japanese Government experimental station, Mr. Kondo, Superintendent of the Nauboku Oil Co., and Mr. T. Tashiro, of the Hoden Oil Co. It appeared in the last issue of the "California Derrick," and we congratulate our contemporary upon the publication of so interesting and authentic an article upon Japanese petroleum and its properties.

(Continued from page 174.)

The present industry of lubricating oil is not so important, but it is certainly a very interesting and necessary subject to investigate. At present a large percentage is used for liquid fuel only.

Intermediate oil from the crude oil is washed with sulphuric acid and caustic soda and finally filtered with "acid clay," which is produced at Kambarba, Echigo, according to my patent process, and used as a mixer for other lighter kerosenes. This acid clay has stronger decolourising powers than fuller's earth or Florida earth. I will describe my investigation of this clay in another subject. The properties of the Kitano petroleum oil differ widely from the above three petroleums, but somewhat resemble the following two, Hara and Ojiya. The oil is of lampblack brown colour. Its specific gravity 0·871 at 15·5° C. The results of fractional distillation are as follows, each fraction being one-tenth of the crude oil by volume.

AN UP-TO-DATE PHOTOGRAPH TAKEN IN THE JAPAN FIELDS.

Number of Fractions.	Specific Gravity.
First product	0·7840
Second product	0·7992
Third product	0·8191
Fourth product	0·8311
Fifth product	0·8489
Sixth product	0·8638
Seventh product	0·8890
Eighth product	0·9040
Ninth product	0·9188

By fractional distillation referring to boiling point, the following results are obtained :—

Fractions. Deg. C.	Per cent.
Under 150	10·5
150–200	25·0
200–250	23·0
250–300	25·5
Above 300	26·0

The oil contains 0·094 per cent. of sulphur and 0·166 per cent. of nitrogen. The iodine absorption value of Huble's method is 3·319. The oil contains 10·0 per cent. of resinous matter. Coefficieut of expansion is 0·000083. The oil contains large quantities of vaseline and paraffin. The heavier fraction above 360° C. solidifies at ordinary temperatures, having about the consistency of butter. Solid paraffin separates as scaly fragments by treatment with petroleum benzine. Vaseline and paraffin were separated from the oil residuum, which was estimated at 8 per cent. of the crude oil. This was carried out as follows :—The dark yellowish residuum was at first filtered through charcoal in a hot filter, and then a pale yellowish, butter-like mass was obtained. And two different paraffins were distinctly separated by adding the petroleum benzine drop by drop to this mass, the one dissolving easily and passing into solution, while the other remained in the state of scaly fragments. I have filtered this and obtained both the scaly paraffin and the filtrate. The scaly fragments thus separated, being dissolved in ether and the latter expelled, a white, hard paraffin, which melts at about 45° C., was obtained. The solvent from the above filtrate was expelled, then the yellowish amorphous, butter-like vaseline was obtained, the melting point being about 30° C.

As the production of the Kitano oil is not as much at present, the fractionation is carried out in one of the refineries as follows: —Light oil, 4·2 per cent.; light burning oil, 8·4 per cent.; burning oil, 40·0 per cent.; heavy burning oil, 12·6 per cent.; residuum and loss, 34·8 per cent. Second-class burning oils are made by mixing the above light and heavy burning oils.

Generally speaking, the Kitano oil is not of good quality for burning oil. Both in practice and laboratory experiments, the parallel products of this oil do not give equal illuminating power compared with the oils from Higashiyama and Nishiyama. Some difference must exist in the chemical composition of the Kitano (Kubiki) and the latter two oils above. The peculiarities of the Kitano oil cannot be explained until we have determined the percentages of C and H of some definite fractions obtained by precise fractional distillation under diminished pressure, or until we have estimated the nitrogen contents by combustion. But considering the properties of the burning oil from this source, it will be seen that this crude oil probably contains hydrocarbons rich in C, such as $C_n H_{2n}$. If this be so, then the method of refining now in use will need many improvements. There are many questions concerning the Kitano oil to be solved. The Hara petroleum oil is of light blackish brown colour, and gives a characteristic odour. Its specific gravity is 0·8173 at 15·5° C. The results of fractional distillation are as follows, each fraction being one-tenth of the crude oil by volume :—

Numbers of fractions.	Specific Gravity.
First product	0·7380
Second product	0·7565
Third product	0·7725
Fourth product	0·7848
Fifth product	0·7964
Sixth product	0·8129
Seventh product	0·8353
Eighth product	0·8597
Ninth product	0·8750

By the fractional distillation referring to the boiling point, the following results are obtained :—

Fractions. Deg. C.	Per Cent.
Under 150	41·2
150-270	43·8
Above 270	15·0

When the fraction under 150° C. is redistilled, it gives the following results :—

Fractions. Deg. C.	Per Cent.
Under 170	1·0
70-80	1·2
80-90	6·8
90-100	5·0
100-110	6·0
110-120	6·0
120-130	4·4
130-140	5·2
140-150	5·2

The oil contains 0·083 per cent. of sulphur and 0·099 per cent. of nitrogen. The iodine absorption value is 1·534. It contains 5·0 per cent. of resinous matter. Co-efficient of expansion is 0·000088. The oil contains a small quantity of vaseline and paraffin. The fraction which distills off above 360° C. solidifies at about 10° C. I have separated vaseline and paraffin from the oil by the method described under the Kitano petroleum. I have examined the products from both Hara and Kitano petroleum respectively, which I have obtained by the above fractional distillations. Colour, odour, flashing point, and solidifying point of each fraction were compared after purifying them with combined sulphuric acid and caustic soda respectively. Also, the bromine reaction and the behaviour toward sulphuric acid, nitric acid, etc., were tested. And finally I arrived at the conclusion that the Hara petroleum has similar properties to the Kitano petroleum, although the crude oils differ rather widely in their specific gravity.

The oil from Ojiya is of pale amber colour, and the specific gravity is 0·8033 at 15·5° C., thus shewing it to be the lightest oil among the various specimens which I have examined. The results of fractional distillation are as follows, each fraction being one-tenth of the crude oil by volume :—

No. of Fractions.	Specific Gravity.
First product	0·7047
Second product	0·7358
Third product	0·7512
Fourth product	0·7641
Fifth product	0·7833
Sixth product	0·7979
Seventh product	0·8250
Eighth product	0·8591
Ninth product	—

By the fractional distillation referring to the boiling point, the following results are obtained :—

Fractions. Deg. C.	Per Cent.	Specific Gravity.
Under 150	52·4	0·7557
150-200	18·7	0·8271
200-250	9·7	0·8510
250-300	11·1	0·8998
Above 300	8·1	—

When the fraction under 150° C. is redistilled, then the following results are obtained : —

Fractions. Deg. C.	Per Cent.	Specific Gravity.
Under 60	0·72	0·6487
60-70	1·80	0·6878
70-80	3·55	0·7151
80-90	8·80	0·7381
90-100	11·20	0·7590
100-110	4·60	0·7650
110-120	7·00	0·7745
120-130	3·80	0·7902
Residue	5·60	0·8006

The oil contains 0·035 per cent. of sulphur and no nitrogen. The iodine absorption value by Huble's method is 0·731. The oil contains 2·5 per cent. of resinous matter. After agitation with concentrated sulphuric acid, the oil has a specific gravity of 0·7880. By this means, pale yellowish oil was obtained. And the loss due to treatment was 8·0 per cent. Coefficient of expansion is 0·000099.

(To be concluded.)

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The American Oil Market.

New York, Week ended Mar. 13th.

Advices from our field correspondents in the Eastern section for the week note a general increase in development work, although conditions on the whole have not been especially favourable for drilling. The greatest difficulty has been experienced in hauling machinery and supplies to the scene of operations. Work has been particularly impeded in the South-eastern Ohio section, but despite the drawback, the results in this section have been among the most favourable to be recorded during the week. From 23 successful completions there was a new daily production averaging 720 barrels, while for the former week the returns shewed a daily average of 143 barrels from 12 wells in the producing class The more encouraging showing was occasioned chiefly by the bringing in of two wells of unusual capacity, one in Washington county, which started at the rate of 200 barrels a day, and the other in Monroe county, which was credited with an initial output of 125 barrels. Fairfield and Perry counties in the same section continue to attract keen attention, but the results in the latter were rather disappointing. The shallow sand development of Columbiana county offers a steady incentive to operators by reason of the comparatively small expense, but of the four wells drilled during the week but two were producers, with a daily aggregate of 75 barrels. Interest in Jefferson county centres in the Osage pool, but no results of an unusual character have been disclosed. The recent completions, says the *Oil, Paint and Drug Reporter*, are steady producers, and the aggregate of the formation is placed at 600 barrels a day. West Virginia returns shew a decrease in completed work and new production, as compared with those of the former week. Ritchie county takes the lead in results for the current week, being credited with a new daily production of 310 barrels from two of the four wells drilled. One of these flowed at the rate of 300 barrels the first 24 hours, but the capacity of this producer was forced by agitation, and it is doubtful whether it can maintain anything like its initial output. Lincoln county furnished its usually steady number of producers, averaging between 25 and 30 barrels per day. The record for Brooke county shews nothing but dusters. The North-western Ohio end continues the most active of the Lima field and of the 25 wells completed during the week not a duster was encountered, and the new production averaged 475 barrels a day. Indiana operations are still retarded by the lack of natural gas for fuel. But seven completions are recorded in the State for the week, and the new daily production amounted to 182 barrels. Advices from our Kentucky correspondent record little of new interest in the recent operations there. The best strike was encountered in an old development in Wayne county, good for 50 barrels a day. The tendency to depart from the established fields has found slight incentive in late tests. Field work in Illinois has been fairly well sustained during the week, but our correspondent believes the outlook will be materially improved with the settlement of the tariff question in favour of the retention of the countervailing duty on crude. Of principal interest in the Mid-Continent field is the news of two important sales of Glenn pool production, aggregating about 5,500 barrels daily, for which the consideration was in excess of 1,000,000 dollars.

Refined and Products.—The interval has contributed a feature of particular interest in the local market for refined in the aggregate of the export movement, the week's clearances shewing a total of 25.909,220 gallons, which quantity is believed to establish a high record for this port. This unusual aggregate is accounted for by the presence here of more than the usual number of the tank fleet available for loading. There were nine of these steamships, carrying a total of 18,869,730 gallons. Of this quantity 9,800,000 gallons are destined for London, and nearly all of the balance for Continental ports. There has been nothing to occasion particular interest in the market for the various products during the week, but the demand is reported to be of fully sustained proportions, with a tendency toward expansion for the motor trade. While the export movement for naphtha was materially below the unusual record of 2,713,500 gallons previously noted, it embraced a fairly large total, 895,630 gallons. Prices are nominally steady at recently ruling quotations.

CLOSING QUOTATIONS.

Crude at the Wells.

The quotations for oil represented by credit balances were :—

	Week ended Mar. 13. 1908.	Week ended Mar. 13. 1909.
Pennsylvania	$1·78	$1·78
Tiona	1·78	1·78
North Lima	1·04	1·04
South Lima	0·99	0·99
Indiana	0·99	0·99
Illinois, heavy, below 30 deg. ..	0·60	0 60
Kansas and Indian Ter., 32 deg. and above	0·41	0·41
Heavy	0·28	0·28
Humble, Tex.	0·73	0·53
Saratoga	0·71	0·53
Sour Lake, Tex.	0·75	0·53
Jennings, La.	0·70	0·54
Canadian Oil :—		
Petrolia	1·34	1·44
Oil Springs, less pipeage	1·41	1·51

Refined—For Export.

In cents.	Week ended Feb. 13 S.W. 110 test.	W.W. 150 test.
Barrels, cargo .. .. per gal.	8·50	@10·00
Philadelphia	8·45	@ 9·95
Bulk, New York	5·00	@ 6·50
Bulk, Philadelphia	4·95	@ 6·45
Cases, New York	10·90	@12·40
Cases Philadelphia	10 85	@12·35

Refined in Cases—110 Fire Test.

	Week ended Mar. 7. 1909.	Mar. 13. 1909
3,000 to 10,000	11·05	11·05
1,000 to 3,000	11·10	11·10

Refined—Jobbing Lots.

In barrels, pkgs. included.

	Week ended Mar. 7.	Feb. 13.
130 fire test, S.W.	11¾	11¾
150 fire test, W.W.	12¼	12¼
In bulk from tanks	9	9
300 fire test	13¼@13¾	13@13¾

Naphtha and Gasolene.

	Week ended Mar. 7.	Mar. 13.
Naphtha, V. M. and P. deod. ..	11¾	11¾
Gasolene, 86 deg.	22¾	22¾

Pennsylvanian Oil Runs from Mar. 4th to Mar. 10th were :—Mar. 4th, 179,894* ; Mar. 5th and 6th, 208,147* ; Mar. 7th, 46,920 ; Mar. 8th, 261,408* ; Mar. 9th, 244,566 ; and Mar. 10th, 97,967.

* Includes Illinois Oil.

The Deliveries of Pennsylvanian Oil from Mar. 5th to Mar. 11th were:—Mar. 5th, 180,803* ; Mar. 6th and 7th, 276,515* ; Mar. 8th, 158,560 ; Mar. 9th, 364,632* ; Mar. 10th, 275,736* ; and Mar. 11th, 189,516.

* Includes Illinois Oil.

Clearances for the Week.

During the week ended Mar. 26th and since Jan. 1, the clearances of petroleum, in gallons, from the port of New York, were as follows :—

	Week.	Year.	1908.
Refined	25,909,220	111,399,480	110,497,000
Crude	712,985	6,774,915	1,538,610
Naphtha	895,630	5,636,780	1,119,570
Residuum ..	32,370	93,220	573,900

Export Statistics.

The total exports from the port of New York and from the United States have been :—

	Gallons.
From New York, week ended Mar. 12th ..	35,258,612
Total from New York, from Jan. 1st, 1909 ..	155,308,555
Same period last year	148,912,944
Increase	6 395,611
From United States, week ended Mar. 12th	42,423,990
Total from United States, since Jan. 1st, 1909	252,392,489
Same period last year	283,151,747
Decrease	30,759,258

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The "Review" Shipping List.

March 26, 1909.

(*The following abbreviations are used in this table*:—L. Left; P. Passed; Arr. Arrived; Sp. Spoken; Tr. Trading.)
Anglo-American Co.'s vessels marked thus (□): the Anglo-Saxon Co.'s tankers thus (*): and Messrs. Lane and [illegible]acandrew's thus (†).

Vessel.	From.	For.	Latest Date and Position.
ALCHYMIST	London	Smyrna	At Malta, Mar. 20/1
ALICE ET ISABELLE (Fr. bq.)	—	—	In Port, Feb. 24, laid up
AMERICAN	Batoum	Antwerp	At Zoungouldk, Mar. 3
APPALACHEE □	Kustendje	—	At Port Said, Mar. 21/2
APSCHERON	Batoum	Thameshaven	L Mar. 22
ARAL	Algiers	Tyne	Arr. Feb. 25, in Port, Mar. 16
ARAS	Amsterdam	Blyth	Arr. Mar. 6, in Port, Mar. 23
ASHTABULA □	Moji	San Francisco	Arr Mar. 12
ASTRAKHAN	Tyne	Philadelphia	P. Butt of Lewis, Mar, 8
AUGUSTA	Thameshaven	Philadelphia	S. Portland, Mar. 10
AUGUST KORFF	Liverpool	Philadelphia	P. Nantucket, Mar. 24
AUREOLE	London and Amsterdam	New Orleans	P. Lizard, Mar. 9
BAKU STANDARD	Ely Harbour	Cardiff	Arr. Jan. 24, in Port, Mar. 23
BALAKANI†	Newport News	Sunderland	L. Mar. 16
BATOUM	Rotterdam	Thameshaven	Arr. Mar. 20
BAYONNE	Naples	Philadelphia	P. Tarifa, Mar. 13
BEACON LIGHT	Philadelphia	La Pallice	P. Del. Break., Mar. 10
BLOOMFIELD	Manchester	Emden & Galveston	Sd Norfolk (Va.), Mar. 19
BORJOM	Batoum	Alexandria	Arr. Mar. 13
BRILLIANT	Tyne	New York	Arr. Mar. 19
BROADMAYNE	Tonsberg	Tyne	Arr. Feb. 13, in Port, Mar. 23
BULLMOUTH*	Shanghai	Calcutta	Arr. Mar. 21
BULYSSES*	Singapore	Saitozaki	Arr. Mar. 21
BURGERMEISTER PETERSEN	Tyne	Philadelphia	L. Mar. 22
BUYO MARU	Sabine Pass	Yokohama (via Suez)	Arr. Feb. 5
CADILLAC	Philadelphia	Dublin	Arr. Mar. 24
CALCUTTA (B. b.) □	Tsingtan	San Francisco	Arr. Mar. 23
CAPTAIN A. F. LUCAS (with S.O. Barge 95)	Philadelphia	Havana	Arr. about Mar. 23
CARDIUM*	Batoum	Bombay & Cochin	Arr. prev. Mar. 25
CARPATHIAN†	Tyne	Port Arthur (Texas)	L. Mar. 20
CAUCASIAN†	Tyne	Port Arthur (Texas)	L. Mar. 12
CHARLOIS	Philadelphia	Antwerp	L. Mar. 16
CHESAPEAKE □	Sabang	Port Natal	L. Mar. 2
CHESTER	Antwerp	Kustendje	Off Ushant, Mar. 21
CHEYENNE	Tyne	New York	P. Dunnet Head, Mar. 21
CITY OF EVERETT (with S.O. Barge 94)	New York	Philadelphia	L. Mar. 8
CIUDAD DE REUS	New York	Palma	L. Mar. 6
CLAM*	Singapore	Saitozaki	L. Mar. 12
CLEMATIS	Antwerp & Tyne	Fernandina	P. Prawle Pt., Mar. 15
COALTAR (s.)	Selzaete	Groningen	L. Mar. 23
COL. E. L. DRAKE	—	—	Coasting U.S. and Pacific
COWRIE*	Singapore	Kobe	L. Mar. 20
CUYAHOGA □	Shanghai	Rotterdam	S. Algiers, Mar. 17
CYMBELINE	Port Arthur (Texas)	Portland	L. Mar. 19
CZAR NICOLAI II.	Batoum	Hamburg	Arr. Mar. 23
DAGHESTAN	Batoum	Hamburg	Arr. Mar. 22
DAKOTAH □	—	San Francisco	At Shanghai, Mar. 20
DELAWARE □	Philadelphia	Liverpool	L. Mar. 15
DERBENT	Antwerp	Philadelphia	P. Lizard, Mar. 22
DEUTSCHLAND	New York	Hamburg	Arr. Feb. 27, in Port, Mar. 16
DIAMANT	Tyne	New York	P. Dunnet Head, Mar. 16
EDWARD DAWSON	Port Arthur (Texas)	Liverpool	At Fayal, Mar. 8
ELAX*	Balekpappan	Woosung	L Mar. 17
ELISE MARIE	Malmo	Hamburg	Arr. Mar. 6, in Port, Mar. 21
EL LOBO	Campana	Payta	Arr. Mar. 8
ENERGIE	Pillau	Philadelphia	P. Butt of Lewis, Mar. 19
ERIVAN	Batoum	Rouen	At Liverpool, Mar. 22
ETELKA	Batoum	—	Arr. Mar. 21/2
EUPLECTELA*	Alexandria	New York	P. Perim, Mar. 12
EXCELSIOR	New York	Rotterdam	L. Mar. 13
FRANCE MARIE (French bq.)	Cette	New York	P. Tarifa, Mar. 16
GEESTEMUNDE	Rouen & Tyne	New York	P. Dunnet Head, Mar. 16
GENESSE □	Manchester	Sunderland	Arr. Mar. 22
GEORGIAN PRINCE	Philadelphia	Rouen	Arr. Mar. 22
GOLDMOUTH*	Batoum	Colombo	Arr. Mar. 22
GUTHEIL	Tyne	Philadelphia	At New York, Mar. 21
HAINAUT (Du. sh.)	New York	Antwerp	Arr. Mar. 16, in Port, Mar. 22
HARRY WADSWORTH	Hull	New Orleans	Arr. Mar. 23
HELIOS	Rouen	Philadephia	At New York, Mar. 14
HERMIONE	Rotterdam	Cardiff	Arr. Mar. 22, in Port, Mar. 23
HESPERUS	New York	Rotterdam	L. Mar. 13
HOTHAM NEWTON	Batoum	Hamburg	S. Constant'ple, Mar. 16
HYRCANIA	Manchester	Batoum	P. Tarifa, Mar. 13
IOANNIS COUTZIS	Cardiff	Piræus	Arr. Mar. 3, in Port, Mar. 8
IROQUOIS □ (towing barge Navahoe)	New York	London	Arr. Mar. 24
J. B. AUG. KESSLER	New York	Kurrachee & Bombay	L. Mar. 12
JAMES BRAND	Tyne	Baltimore	L. Mar. 19
JOYO MARU	Port Arthur (Texas)	Avonmouth	Arr. Mar. 12, in Port, Mar. 23
JULES HENRI (French bq.)	Philadelphia	Cette	Arr. Mar. 22
KURA	New York	Belfast	L. Mar. 10
LA CAMPINE	Antwerp	Philadelphia	P. Scilly, Mar. 16
LA FLANDRE	Ghent & Fayal	Philadelphia	In Tyne, Feb 28
LA HESBAYE	New York	Antwerp	Arr. Mar. 22
LACKAWANNA □	Bombay	Aroe Bay	L. Mar. 16
LANSING	Pt. San Luis	San Francisco	L. Mar. 1
LE COQ†	New York	Havre	L. Mar. 10
LOUTSCH	Havre	Rouen	L Mar. 23
LUCERNA	Novorossisk	Bordeaux	P. Sagres, Mar. 21
LUCIGEN	Trial Trip	Tyne	Arr. Mar. 6, in Port, Mar. 23
LUCILINE†	Rouen	New York	L. Mar. 10
LUMEN	New York	Oporto	At Lisbon, Mar. 21
LUTETIAN†	Rouen	Novorossisk	L. Mar. 25
LUX†	Novorossisk	Rouen	P. Lisbon, Mar. 23
MAKKAVEI	Odessa	Novorossisk	L. Mar. 8
MANHATTAN	Venice	Batoum	L. Mar. 19
MANNHEIM	Amsterdam	Philadelphia	Off the Wight, Mar. 13
MARGARETHA	Batoum	Hull	P. Gibraltar, Mar. 18
METEOR	Batoum	Vladivostock	Cld. Perim, Mar. 6
MEXICAN PRINCE	Christiana	Middlesbro'	Arr. Jan. 19, in Port, Mar. 22
MINA BREA	—	—	Lnchd. Greenock, Mar. 10
MIRA	—	—	In Port Blyth, Jan. 26, laid up
MUREX*	Honololu	Yokohama	Arr. Mar. 24
NARRAGANSETT	London	Tyne & New York	L. Mar. 23

Vessel.	From.	For.	Latest Date and Position.
NEWYORK □	New York	Rotterdam	P. Prawle Pt., Mar. 23
NIAGARA	San Francisco	Taku	L. Feb. 23
OBERON	Manchester	Port Arthur (Texas)	L. Mar. 23
OCEAN	Philadelphia	Antwerp	P. Del. Break., Mar. 15
OILFIELD	Tyne	Port Arthur (Texas)	L. Mar. 24
OKLAHOMA	Port Arthur	Bayonne	L. Mar. 12
ORIFLAMME†	Rouen	Tyne	Arr. Mar. 19
OTTAWA □	Philadelphia	Avonmouth	L. Mar. 16
OURAL	Batoum	Rouen	Arr. Mar 19
PATELLA	—	—	Lnchd. Wallsend, Mar. 11
PAUL PAIX	Penarth	New York	Arr. Mar. 22
PAULA	Hamburg	New York	Sd. Tyne, Mar. 12
PECTAN*	Sabine Pass	London	L. Mar. 21
PENNOIL	Tyne	Philadelphia	P. Dunnet Head, Mar. 14
PETROLEINE	Philadelphia	Cette	Arr. Mar. 22
PHOEBUS	New York	Hamburg	L. Mar. 15
PINNA†	Payta	Yokohama	L. Feb. 25
POTOMAC □	Liverpool	New York	L. Mar. 18
PROGRESSO ARGENTINA (Ar. bq.)	Port Arthur (Texas)	Campana	Sp. Feb. 5 off Fowey Rks., Flda.
PROMETHEUS	Hiogo	Shanghai	S. Penang, Mar. 22
PRUDENTIA	Hull	Port Arthur	P. Lizard, Mar. 14
PURELIGHT	Philadelphia	Philadelphia	P. Dungeness, Mar. 25
QUEVILLY (Fr. bq.)	Rouen	New York	L. Feb. 11
RENDOVA (Br. bq.)	Seville	New York	L. Mar. 18
RION	Penarth	Philadelphia	Arr. Mar. 24
ROCK LIGHT†	Galveston	Port Arthur (Texas)	Arr. Mar. 24
ROMANY*	—	Palembang	Arr. Mar. 20
ROTTERDAM	New York	Amsterdam	P. Dover, Mar. 24
ROUMANIAN†	Port Arthur (Texas)	Hamburg	L. Mar. 17
RUSSIAN PRINCE	Tyne	Cienfuegos	P. Prawle Pt., Mar. 2
SALAHADJI	—	Singapore	Arr. Mar. 7
SAN CRISTOBAL	Port Arthur (Texas)	Liverpool	Arr. Feb. 12, in Port, Mar. 24
SAN IGNACIO DE LOYOLA (Sp. bq.)	Pasages	New York	Arr. Mar. 22
SANTA MARIA	Port Harford	Taltal	Arr. Feb. 18
SANTA RITA	San Francisco	Honolulu	Arr. Mar. 10
SARANAC □	Thameshaven	Tyne	Arr. Mar. 23
SAXOLEINE	New York	Bordeaux	Arr. Mar. 21
SCHUYLKILL	Cebu	Manila	Arr. Mar. 15
SEMINOLE □	Monte Christo	New York	Arr. Mar. 15
SERVIAN†	Port Arthur (Texas)	Manchester	L. Mar. 20
SNOWFLAKE	Tyne	Cuba	Arr. Mar. 22
SOYO MARU	Lobitos	Yokohama	Sd. Honolulu, Mar. 6
SPONDILUS*	Samboe	Europe	S. Port Natal, Mar. 4
STANDARD	Havana	Boston	Arr. Mar. 12
STROMBUS*	Balekpappan	Singapore	L. Mar. 18
SULTAN VAN LANGKAT	Freshwater	Adelaide	Arr. ab't Mar. 23
SUN	Philadelphia	Sabine	P. Del. Break., Mar. 11
SUNLIGHT (Br. bq.)	Port Arthur	Foynes	L. Mar. 10
SURAM	Philadelphia	Hamburg	L. Mar. 16
SUWANEE □	Hull	New York	P. Lizard, Mar. 13
SVIET	Kustendje	Rouen	S. Algiers, Mar. 19
TAMARC □	Philadelphia	London	In Wireless Com., Mar. 18, about 141 N.—57 W.
TELENA*	Philadelphia	Calcutta	P. Reedy Island, Mar. 14
TEREK†	Philadelphia	Venice	L. Mar. 19
TEXAS	Avonmouth	Port Arthur (Texas)	Arr. Mar. 15
TIFLIS	Port Arthur (Texas)	Rouen	L. Mar. 21
TIOGA □	Copenhagen	—	P. Elsinore, Mar. 20
TONAWANDA □	San Francisco	Hong Kong	Arr. Mar. 6
TRINCULO	Port Arthur (Texas)	Portland	S. Newport News, Mar. 14
TROCAS	Singapore	Balekpappan	L. Mar. 19
TUSCARORA	Karikal	Calcutta	Arr. Mar. 3
VEDRA	Singapore	Channel	L. Mar. 16
VILLE DE DIEPPE (Nor. bq.)	Rouen	Philadelphia	L. Feb. 27
VOLUTE	Freshwater	Shanghai	L. Mar. 15
WASHINGTON	Baltimore	Kurrachee	Sd. Suez, Mar. 7
WASHTENAW	San Francisco	Portland (O.)	L. Mar. 1
WEEHAWKEN	Bouc	Kustendje	Sd. Constant'ple, Mar. 19
WILLKOMMEN	Tyne	Philadelphia	P. Butt of Lewis; Mar. 11
WINNEBAGO	—	—	Coasting U.S. and Pacific

Latest Market Intelligence.

LONDON OIL MARKET.

Supplied by Messrs. Benjamin & Gee, 31, St. Mary Axe, E.C.

March 26th, 1909.

The price of Refined Petroleum remains unaltered as follows:—Russian, $6\frac{1}{4}$d.; American, $6\frac{7}{8}$d.; Water White, $7\frac{7}{8}$d.; Roumanian, 7d.

LUBRICATING OILS

Are unchanged, the latest quotations being:—

American pale, £6 10s. to £10 10s.
American dark cylinder, from £8.
American filtered cylinder, from £11 5s.
No. 1 Russian, for Spot, £8 7s. 6d.

TURPENTINE.

The prices of American Turpentine are again lower, but are fairly firm at present prices which are for Spot, 26/-; slightly higher for May/June; and July/December, 26/9.

LIVERPOOL OIL MARKET.

March 25th.

Refined oils are quiet, and sellers quote $6\frac{3}{4}$d., for Russian, Galician or Roumanian; and $7\frac{1}{4}$d. to $8\frac{1}{4}$d. per gallon for American.

Petroleum Spirit continues at 1s. 0d. to 1s. $1\frac{1}{2}$d. per gallon for American deodorised, according to quality on the spot.

LATEST AMERICAN PRICES.

New York, March 25th.

Refined, in cases, is steady at 10·90; Standard White, 8·50; Credit balances, 1·78c.

Philadelphia, March 11th.

Standard White is now quoted at 8·45.

RUSSIA. Baku, March 22nd.

The Baku oil market is firm. Crude oil, spot, $22\frac{1}{2}$-$22\frac{3}{4}$ copecs per pood. Residuals, $22\frac{1}{8}$ copecs. Kerosene, in ships, 32 copecs.

BELGIUM.

Antwerp, March 22nd.

The petroleum market is firm. Price of Standard White, spot, 22 francs per 100 kilos; March, $22\frac{1}{4}$.

FRANCE. Paris, March 20th.

Illuminating oil is quoted in bulk, in whole tank waggons, 24·50 francs per hectolitre; spirit, 33·75 francs per hectolitre. Special white oil, in barrels or cans, 32·50 francs per hectolitre.

GERMANY.

Hamburg, March 20th.

The kerosene market is weaker. The price of American Standard White is 7.25 marks per 50 kilos.; Galician, 6.95 marks.

HOLLAND.

Amsterdam, March 20th.

The petroleum market remains firm. American Standard White, spot, 12·20 florins per 100 kilos.

ROUMANIA. March 20th.

	Francs.
Crude oil from different fields, including pipe line charges, per 100 kgs.	4·50–4·70
Refined oil, exclusive of taxes, ex. refinery	8·70
Benzine, 717–720, including taxes	20·00
Benzine, 750–760	11·00–12·00
Residuals in tank waggons, at refinery	4·30– 4·35
Paraffin	120·00–130·00
Prices for Export.	
Refined oil, f.o.b., per 100 kgs.	7·25–7·75
Benzine, sp. gr. 0·710–0·715, f.o.b.	17·00–18·00
,, sp. gr. 0·715–0·720 ,,	14·50–15·50
,, sp. gr. 0·730–0·740 ,,	10·00–11·00
,, sp. gr. 0·745–0.755 ,,	9·00–10·00

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IMPORTS of PETROLEUM into UNITED KINGDOM

Specially prepared for this Journal by the Custom House.

FOR THE WEEK ENDED 15TH MARCH, 1909—

Date.	Port and Importers.	Descrip-tion.	No. of Gals.	Port Whence.
Mar.	LONDON—			
9	J. Spurling	Lub. Gr	280	New York
9	J. Harrison	,,	720	Antwerp
10	London and India Docks Co.	Lub.	3,850	Hamburg
10	Scott's Wharf	,,	2,800	New York
10	Cleaton and Page	,,	4,000	,,
10	Fielder, Hickman and Co.	,,	11,600	,,
11	J. R. Grant	Lub. Gr.	400	Brussels
11	G. Haller and Co.	Lub. Oil and Gr.	140	Antwerp
11	Page, Son and East	Lub. Gr.	120	,,
11	H. Finckler and Co.	L.Resid.	18,920	Fiume
11	Produce Brokers' Co.	Lub.	4,800	New York
11	Anglo-American Oil Co.	,,	62,360	,,
11	London & India Docks Co.	Lub. Oil and Gr.	400	,,
5/3	(By qy.) A. Lund and Co.	L.Emulsion	500	Amsterdam
12	J. Harrison	Lub. Gr.	1,200	Antwerp
12	British and Foreign Wharf.	Lub.	520	,,
12	Union Lighterage Co.	,,	2,000	,,
12	Argo Steamship Co.	,,	110	Bremen
12	T. H. Lee	Lub. Gr.	250	Hamburg
12	Grindley and Co	Lub.	8,400	New York
13	J. Spurling	Lub.Gr.	240	,,
13	A. Duckham and Co.	Crude	600	Pt. of Spain
13	Schlieman's Oil Co.	Lub.	1,800	Hamburg
13	J. Barber and Co.	Lub Gr.	450	,,
13	T. H. Lee	Lub. Oil and Gr.	160	,,
15	,,	Lub.	500	,,
15	G. Haller and Co.	,,	200	Antwerp
15	British and Foreign Wharf.	,,	2,260	,,
15	Page, Son and East	Lub. Oil and Gr.	160	,,
15	J. Harrison	Lub.	210	,,
15	Van Dam and Co.	Tar Oil	2,480	Rotterdam
15	Anglo-American Oil Co. (Saranac)	Naphtha	1,831,030	New York
15	Mordaunt Bros.	Lub.	16,100	Philadel.
	LIVERPOOL—			
9	Bramwell, Fern and Co.	,,	4,790	,,
9	,,	Lamp	740	,,
9	Crew, Levick and Co.	Lub.	820	,,
9	,,	,,	420	,,
9	E. H. Kellogg and Co.	,,	4,000	New York
9	Valvoline Oil Co.	,,	19,600	,,
9	W. B. Dick and Co.	,,	25,560	,,
9	,,	Lamp	1,900	,,
9	Ismay, Imrie and Co.	Lub.	760	,,
9	Liverpool Storage Co.	,,	7,000	,,
9	,,	Lub. Gr.	1,200	,,
9	American Express Co.	,,	70	,,
9	Colby and Co.	Lub.	1,000	New York
9	Vacuum Oil Co.	,,	10,000	,,
Mar.				
9	D. Owen and Son	Lub.	1,110	New York
9	Fellows, Morton & Clayton	,,	1,400	,,
9	Geo. B. Taylor	,,	600	,,
9	R. Crooke, Jun.	,,	2,230	,,
10	A. Hopps and Sons	,,	4,900	,,
10	Pickford's	Lub. Oil and Paste	260	Hamburg
11	American Express Co.	L.Comp	290	New York
11	G. B. Taylor	Lub.	22,960	,,
12	Rowand and Co.	M. Colza	240	Rotterdam
12	Pickford's, Ltd.	L.Paste	30	Hamburg
15	Anglo-American Oil Co. (Genesee)	Gas	390,000	Sabine
15	,, (Potomac)	Lamp	1,251,470	New York
	BARROW—			
10	Burings and Macdougall (Oberon)	Fuel	654,120	Pt. Arthur
	BRISTOL—			
10	Pickford's, Ltd.	Lub.	480	Antwerp
10	W. G. Clarke	,,	800	,,
12	First Anglo-Russian Oil Co.	,,	510	Hamburg
13	Pickfords	L.Paste	380	,,
13	British Pet. Co. (Joyo Maru)	Lamp	1,909,000	Pt. Arthur
	CARDIFF—			
11	Bristol Steam Nav. Co.	Lub	320	Antwerp
	GRIMSBY—			
9	J. Sutcliffe and Son	,,	250	,,
	HARWICH—			
11	D. Howard	,,	140	,,
	HULL—			
11	Wilsons and N.E. Co.	,,	1,000	Hamburg
11	,,	,,	2,200	Antwerp
15	,,	,,	800	,,
15	T. Wilson, Sons and Co.	,,	123,520	New York
	MANCHESTER—			
9	Homelight Oil Co. (Hyrcania)	Lamp	1,851,400	Batoum
9	Manchester Liners, Ltd.	Lub.	40	Philadel.
9	D. Currie and Co.	,,	360	Hamburg
10	Worthington and Boler	,,	2,730	New York
11	Diamond Lubricating Co.	,,	4,550	,,
11	W. Hodgson and Co.	Lub.Gr.	1,750	,,
11	,,	Lub.	8,080	,,
12	Produce Brokers' Co.	,,	2,400	,,
12	Liverpool Storage Co.	,,	19,880	,,
12	,,	Lub. Gr.	400	,,
12	George B. Taylor	Lub.	228,280	,,
15	Langley, Smith and Co.	,,	1,300	,,
13	British Pet. Co. (Oberon)	Fuel	985,920	Pt. Arthur
23/2	(A.R.) Anglo-Amer. Oil Co. (Ottawa)	Gas	20,040	Philadel.
23/2	,, ,,	Fuel	2,740	,,
6/3	(By qy) F. Woodhill and Co.	Crude	280	Batoum
	NEWCASTLE—			
9	Tyne-Tees S.S. Co.	Lub.	2,840	Antwerp

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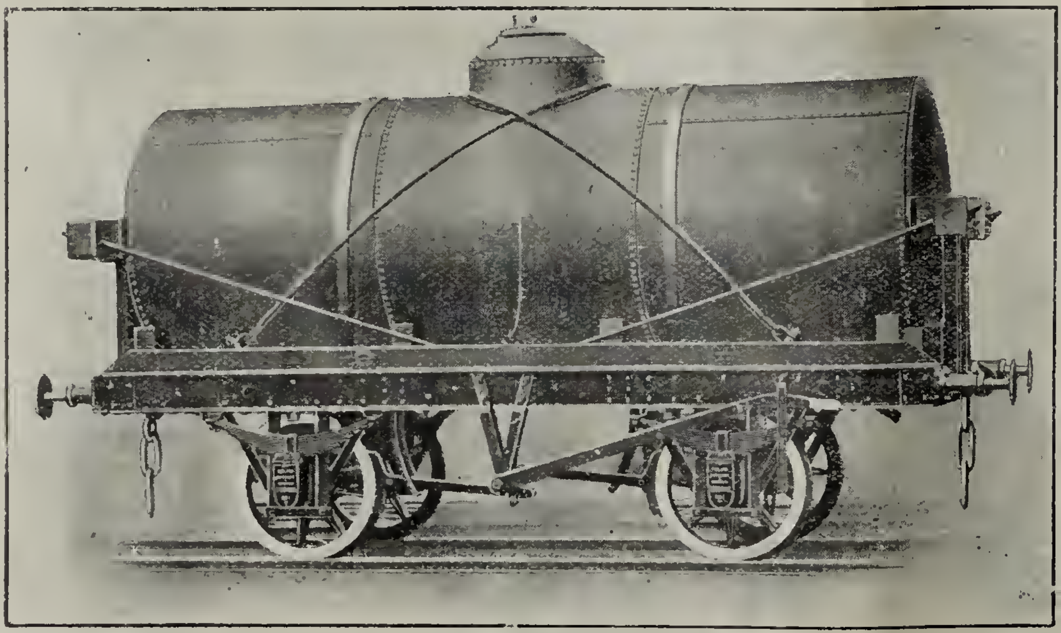

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No corrosive fumes given off. Prevents rust at the joints and consequent leakage. Stronger work. Less solder required.

IMPORTS.—(*Concluded*).

DATE.	PORT AND IMPORTERS	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
Mar.				
9	Tyne-Tees Steamship Co.	Lub.	40	Hamburg
13	,,	,,	40	,,
13	,,	,,	2,680	Antwerp
	PLYMOUTH—			
9	Bristol Steam Nav. Co.	,,	290	,,
	SOUTHAMPTON—			
11	P. E. Curry	,,	180	New York
12	White Star Line	,,	17,200	,,
	ABERDEEN—			
9	R. C. Reid and Co.	,,	80	Hamburg
	GLASGOW—			
11	Anchor Line	,,	52,600	New York
	GRANGEMOUTH—			
10	W. Graham-Yooll and Co.	Lamp	2,000	Hamburg
1/2	(By qy.) ,,	,,	9,000	,,
11	J. Currie and Co.	Lub.	2,280	,,
23/2	(By qy.) J. Ross and Co. (James Brand)	Fuel	2,600	Pt. Arthur
	LEITH—			
11	W. Thomson and Co.	Lub.	240	Reval
11	W. Graham-Yooll and Co.	Lamp	4,360	Hamburg
12	G Gibson and Co.	Lub.	240	Antwerp
12	J. Currie and Co.	,,	480	Bremen
	Total for the Week		9,653,800	

FOR THE WEEK ENDED 22ND MARCH, 1909—

DATE.	PORT AND IMPORTER.	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
Mar.	LONDON—			
16	Mordaunt Bros.	Lub.	15,900	Philadel.
16	A. Brown and Co.	,,	3,600	,,
16	,,	Lamp	4,000	,,
16	Thames Tug & Lighterage Co.	Lub.	6,000	,,
16	J H. White	,,	4,800	,,
16	Produce Brokers' Co.	,,	5,200	,,
16	Fielder, Hickman and Co.	,,	3,280	New York
16	Asiatic Petroleum Co. (Batoum)	Benzine	796,500	Rotterdam
16	London and India Docks Co.	Lub.	3,500	Hamburg
16	Worthington and Boler	,,	5,000	Philadel.
17	Lub. and Fuel Oils Co.	,,	18,450	,,
17	Schlieman's Oil Works	,,	2,600	,,
17	Livett Frank and Son	,,	1,680	,,
17	Asiatic Petroleum Co.	Spt. Illum.	5,000	Rotterdam
17	Schlieman's Oil Works	Lub.	2,000	Hamburg
17	Snowden Sons and Co., Ltd.	White Oil	810	Riga
17	Anglo-American Oil Co.	Lub.	27,200	New York
17	London and India Docks Co.	,,	600	,,
17	European Express Co.	,,	40	Boulogne
18	Schlieman's Oil Co.	,,	2,000	Hamburg
18	Page, Son and East	Lub. Oil and Gr.	320	Antwerp
18	G. Haller and Co.	Lub. Oil and Gr.	200	,,
18	R. Park and Co.	Lub.	350	Marseilles
18	Union Lighterage Co.	,,	2,610	Philadel.
18	Mercantile Lighterage Co.	,,	3,250	New York
19	Anglo-American Oil Co. (Narragansett)	Lamp	2,693,200	,,
19	,, ,,	Lub.	267,610	,,
20	,,	,,	38,000	Philadel.
20	Simpson, Spence and Co.	,,	11,880	,,
20	Thames Tug & Lighterage Co.	,,	4,800	,,
20	T. H. Lee	Lub.Gr.	120	Hamburg
20	Schlieman's Oil Works	Lub. Oil and Gr.	4,630	,,
22	Thames Tug & Lighterage Co.	Lub.	80	Copenhagen
22	British and Foreign Wharf	,,	1,400	Antwerp
22	Lubricating & Fuel Oils, Ld.	,,	4,100	,,
22	Page, Son and East	Lub. Gr.	80	,,
22	Produce Brokers	Lub.	1,000	,,
22	J. Harrison	,,	50	,,
22	Wilkins, Campbell and Co.	Lub. Gr.	240	,,
22	Argo Steamship Co.	Lub.	300	Bremen
22	Anglo-American Oil Co. (Navahoe)	Lamp	2,583,080	New York
22	,, (Iroquois)	,,	1,935,290	,,
22	,, ,,	Gas	343,730	,,
	LIVERPOOL—			
16	Meade-King, Robinson & Co.	Lub. Gr.	10,360	Baltimore
16	,,	Lub.	28,680	,,
16	Pickford's	,,	620	Hamburg
16	Schlieman's Oil Works	,,	250	,,
12	Dee Oil Co.	,,	80	,,
17	Meade-King, Robinson & Co.	,,	40	Philadel.
17	,,	,,	2,680	Baltimore
13/2	(By A.R,) ,,	Gas	48,910	Pt. Arthur
15/2	,, ,,	,,	10,130	,,
17	Schlieman's Oil Works	Lub.	430	Hamburg
22	J. T. Fletcher and Co.	Lub.Gr.	930	Antwerp
22	C. W. Field	Lub.	210	,,
Mar.	BRISTOL—			
16	E. Stock and Sons	L.Paste	350	Hamburg
16	,,	Lub.	560	,,
18	First Anglo-Russian Oil Co.	Resid.	2,000	,,
18	Pickfords	Lub. Oil and Paste	210	,,
20	H. Pritchard and Co.	Lub.	4,200	New York
	GRIMSBY—			
16	J. Sutcliffe and Son	,,	40	Hamburg
16	,,	,,	460	Antwerp
	HARWICH—			
18	D. Howard	,,	410	,,
	HULL—			
16	T. Wilson, Sons and Co.	,,	8,000	Reval
16	W. Gilyott and Co.	,,	89,000	New York
16	Wilsons and N.E. Co.	,,	120	Hamburg
18	,,	,,	9,360	,,
18	,,	,,	600	Antwerp
18	G. Hardy and Co	,,	260	,,
22	Wilsons and N.E. Co.	,,	120	,,
22	,,	,,	360	Hamburg
	MANCHESTER—			
16	Anglo-American Oil Co. (Genesee)	Gas	539,200	Norfolk
16	J. T. Fletcher and Co.	Lub.	910	Antwerp
20	Lamport and Holt	,,	470	New York
22	Liverpool Storage Co.	,,	12,400	,,
20	Manchester Liners	,,	7,760	Philadel.
22	Diamond Lubricating Co.	,,	3,500	,,
22	Worthington and Boler	,,	5,900	,,
22	D. Currie and Co.	,,	200	Hamburg
	MIDDLESBRO'—			
17	J. J. Sutherland	Lub.Gr.	150	Antwerp
	SOUTHAMPTON—			
16	P. E. Curry	Lub.	2,720	New York
	SWANSEA—			
16	Richards, Turpin and Co.	,,	4,600	,,
16	,,	Resid. and Gas	1,000	,,
	ABERDEEN—			
19	R. Connon Reid and Co.	Lub.	120	Hamburg
19	,,	Lamp	4,000	,,
	DUNDEE—			
18	D. Alexander and Sons	,,	240	,,
	GLASGOW—			
16	Clyde Shipping Co.	Lub.	170	Antwerp
18	J. and A. Allan	,,	50,400	Philadel.
18	,,	M.Colza	1,130	,,
	GRANGEMOUTH—			
16	W. Graham-Yooll and Co.	Lamp	2,000	Hamburg
16	J. Currie and Co.	Lub.	4,320	,,
17	W. Graham-Yooll and Co.	Lamp	2,400	,,
20	,,	,,	2,400	,,
20	J. Currie and Co.	L.Paste	140	,,
20	,,	Lub.	1,240	,,
	LEITH—			
16	W. Graham-Yooll and Co.	,,	2,960	Hamburg
16	J. Currie and Co.	,,	400	,,
16	G. Gibson and Co.	,,	80	Antwerp
18	,,	,,	240	,,
18	W. Graham-Yooll and Co.	Lamp	3,230	Hamburg
18	J. Currie and Co.	Lub.	3,000	,,
22	,,	,,	260	Bremen
22	,	,,	1,170	Hamburg
			9,682,560	
	Deduct to correct—			
	HULL—			
11/3	T. Wilson, Sons and Co.	,,	89,000	New York
	MANCHESTER—			
13/2	Meade-King, Robinson & Co.	Gas	9,190	Pt. Arthur
	Total for Week		9,584,370	
	Total for the Fortnight		19,238,170	

BORE HOLES FOR OIL

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The Petroleum Review.

By PAUL DVORKOVITZ.

Vol. XX. *(New Series.)* April 10th, 1909. No. 448

THE PETROLEUM REVIEW:

The ANNUAL SUBSCRIPTION for both English and Foreign readers is 26s., including Postage. Single Copies may be had at the offices at 1s.

The Editor would esteem it a favour if readers, when communicating with the various firms advertising in our pages, would mention the "Review."

Contributions upon items of interest are always welcomed from subscribers, but in each case these should be accompanied with the name and address of the sender, not necessarily for publication.

Editorial Notes.

Three Months' English Oil Trade.

Quite a new record has been established by the oil trade of this country during the past three months, for the total imports are over 95,000,000 gallons, and thus considerably exceed the quantities ever previously imported into this country in thirteen weeks. The great increase is shared by every class of oil—illuminating, lubricating, solar oil, benzine, etc.—so it will be clear the record is not a "snatched" one by any means. It points plainly to the fact that the petroleum trade of the United Kingdom is making real headway. In no branch, however, has the increase shewn in our past three months' trade been so great as in regard to our motor spirit imports. We have received, since the beginning of the present year, approximately, 15,000,000 gallons of spirit, as compared with a total of 5,800,000 gallons for the first quarter of 1908; and thus it is pretty safe to presume that, for the present twelve months, our total benzine imports will be between 50,000,000 and 60,000,000 gallons—a figure which makes past records sink into insignificance.

The London and Thames Haven Oil Wharves, Ltd.

We congratulate the directors and shareholders of the London and Thames Haven Oil Wharves, Ltd., upon having experienced another highly satisfactory year. It is indeed gratifying to see the consistent progress which has been made by this well conducted concern since it went to public issue, now eleven years ago. The company recognises its first duty to be that of a public servant, and consequently it has more than kept abreast of the times in the matter of extending its storages and improving its facilities with the growing trade in petroleum products, which of course calls for greater storage accommodation. Its directors, Mr. Adams, Mr. Burgess, and all its staff, have worked loyally to bring the company up to its present enviable position, and to them great credit is due, for to-day as in the days gone by, it has to be remembered that there is no royal road to success, nor is success showered upon any firm that does not strive to attain it.

American Petroleum Exports.

The statistics given on another page of the February petroleum exports from America cannot be considered at all satisfactory, for they shew a decline of over 20,000,000 gallons during the month under review, and a decrease of nearly $1,500,000 in value. Of course a deal depends upon the position of the tank fleet, but even this, we believe cannot wholly account for the great diminution in the quantities exported. The greatest decrease is in respect of the exports of illuminating oil, and these for the month account for more than one-half of the total decrease, and it is also worthy of note that the exports of crude oil for the month dropped nearly 60 per cent., as compared with the figures for the corresponding period of 1908. One remarkable fact in studying the position of the various export ports is the rise of Sabine, on the Gulf coast. Although in our table we include the shipments with those of Galveston, inasmuch as until recently the bulk of exports *via* the Gulf were shipped at Galveston, to-day Sabine's entirely put those of Galveston in the shade; for instance, during February, Sabine's exports were over 8,000,000 gallons, as against as many thousands from Galveston.

Liquid Fuel on the Roumanian Railways.

As in other parts of the world, so in Roumania, liquid fuel is making considerable headway upon the various railways. But we doubt if in any other country is the new fuel making such rapid progress for use in locomotives. Eight years ago the Roumanian railways took up liquid fuel in earnest, and for that year the consumption of oil in that direction was approximately 20,000 tons. In 1903 the figure had just doubled, while in 1906 the railways consumed no less than 65,000 tons of liquid fuel. Still the extension of its use continued, and, for 1907, a little over 100,000 tons were consumed, while, from the figures which have just been compiled, it appears that last year the Roumanian State railways utilised 145,000 tons. To-day, Roumania possesses about 640 locomotives in constant employment upon her railways, and of this number 540 run upon liquid fuel. It will be seen from the above that Roumania moves in no half-hearted manner when once she has made up her mind to go forward.

The American Oil Fields during February.

There was a general decline in oil-field work in the American fields during February, the new developments not only shewing a decrease, but the new production also dropping much below the figures for several months past. In all the fields, the same state of things is reported, with the one exception of the Mid-Continent territories, where, in spite of the general desire to curtail the production, the February developments shewed an increase. As we announced in our last issue, however, it has been agreed that there shall be a shut-down for four months, and the result of this will doubtless be to greatly improve the at present not too encouraging outlook.

THE INDIAN PETROLEUM MARKET.

(*Crowded out of page* 233.)

Bombay, Mar. 15th.

The petroleum market is strong. The following are the current prices of the Standard Oil Co. of New York:

		Rs	a.	p
Snowflake Brand, 150 deg., American	(per case)	6	4	2
White Rose, 150 deg. ,,	,,	6	4	2
Chester Brand, 76 deg. Abel	,,	4	12	2
Devoe's Brilliant	,,	4	12	2
Monkey Brand, 76 deg. Abel	,,	4	2	2
Elephant Brand, 125 deg. (bulk in tins)	(per 2 tins)	3	4	0
Elephant Brand, 125 deg. (bulk without tins) (per 8 Imperial gallons)		2	4	0

The following are the current prices of the Asiatic Petroleum Co., Ltd.:—

		Rs.	a.	p.
Swan Brand, bulk loose..	(per unit)	1	11	0
Swan Brand, new tins	(per pair)	2	5	0
Ship Brand, bulk loose	(per unit)	2	0	0
Ship Brand, new tins	(per pair)	2	10	0
Rising Sun Brand, bulk loose	,,	2	2	0
Rising Sun Brand, new tins	,,	2	12	0
Anchor Cases	(per case)	4	2	0
Silver Light 150 deg. cases, ...	(per case)	5	4	0

The prices of the Burma Oil Co.'s productions are as under:—

		Rs.	a.	p.
Kerosene, Victoria	(per 2 tins)	3	8	0
Kerosene, Victoria	(per 8 gallons)	2	14	0
Kerosene, Chukker	(per 2 tins)	3	15	0
Kerosene, Chukker	(per 8 gallons)	3	5	0
Burmah Wax	(per pound)	0	4	0
Burmah Candles	,,	0	5	6

◆

Roumanian Residuals for Italy.—The Ministry of the Marine of Italy has decided to buy in Roumania 4,000 tons of residuals for completing the supply of liquid fuel to its coast depôts. The offers for the supply have been made by the Steaua Romana, Credit Petrolifer and Aquila Franco-Romana.

The Question of Sulphuric Acid.—As the production of sulphuric acid in Roumania is not adequate to the demands of the oil refineries, the Association of the Petroleum Producers have decided to petition the Ministry of Commerce to exempt from duty quantities of sulphuric acid brought in from abroad sufficient to cover the deficiency of it in the country.

THE TIN PLATE MARKET.

Messrs. Norton, Owen & Co., of 4, Bishopsgate Street Within, London, E.C., report under date April 7th, 1909, as follows:—

The market shews no sign of improvement. Although tin has advanced fully £5 per ton in the past fortnight tin plates are rather easier, and makers complain that, with tin and steel bars at present prices, the manufacture of tin plates is unprofitable. The position from their point of view is most unsatisfactory, as they cannot get any relief in prices of materials, and they have to face the prospect of dearer coal, and the possibility of labour difficulties in the coal fields in the near future. We make prices of oil sizes to-day:—

IC	18¾ × 14	124 sheets	110 lbs.	11/9 per box.
IC	19¼ × 14	120 ,,	110 ,,	11/9 ,,
IC	20 × 10	225 ,,	156 ,,	16/9 ,,

F.o.b. Wales. Tin lining and iron hooping extra.

◆

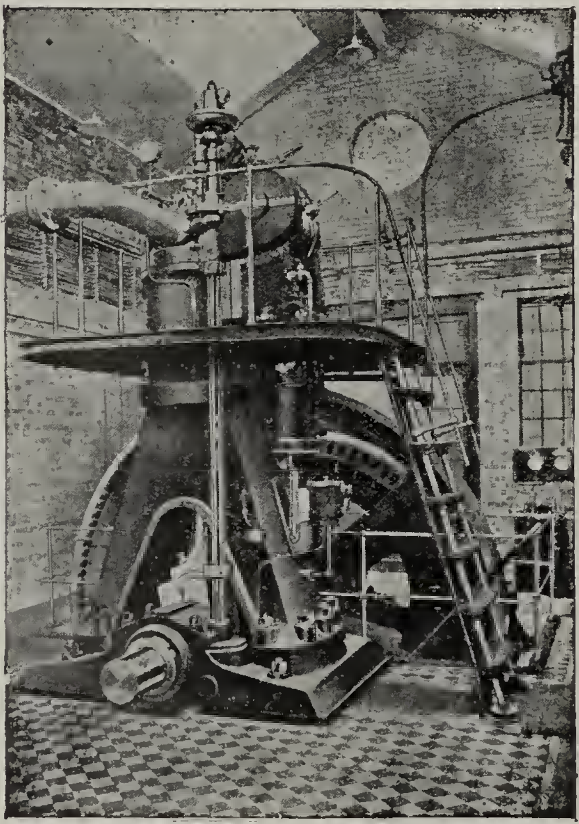
PETROLEUM IMPORTS INTO FRANCE DURING 1908.

The imports of crude petroleum into France during 1908 amounted to 201,217 tons, and came from the following countries:—

	Tons.
America	117,232
Russia	33,771
Roumania	50,051
Other Countries	163

The refined oil imports were as under:—

	Tons.
Illuminating Oil—	
From America	157,000
,, Russia	4,300
,, Roumania	17,300
,, Other Countries	20,000
Total	198,600
Benzine—	
America	48,700
Russia	7,200
Roumania	60,500
Other Countries	1,800
Total	118,200



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The Petroleum Storage Installations of Roumania.

SPECIALLY TRANSLATED FROM THE "MONITEUR DU PETROLE ROUMAIN."

With the continuous extension of the Roumanian petroleum industry, and the expansion of that country's export trade in petroleum products, the installations for the storage of the crude oil and the refined products become of additional importance each year. At the end of 1908 the State installations at Constantza consisted of 25 large tanks, each of 4,000 tons capacity, so that the total capacity of the depôt, including auxiliary tanks, is now about 100,000 tons. The total quantity of petroleum and products exported by the tank steamers to various countries during 1908 amounted to 367,924 tons, and the total quantity stored there during the year was 492,723 tons. In addition to the State installations, there are at Constantza three private petroleum depôts situated at Medea point, these belonging to the Steaua Romana, the Aquila Franco Romana, and the Romano-Americana.

The Petroleum Reservoirs at Constantza.

The pumping from the tanks into the tank steamers is a business of the State, so that from these private tanks the oil first has to pass over into the State tanks rented by the companies and from these into the steamers lying in the port.

The capacities of these installations are as follows:—

(1) The station of the Steaua Romana at Medea has twenty tanks of a total capacity of 24,000 tons, and four pipe lines to the State installations.

(2) The station of the Aquila Franco-Romana has nine tanks of a total capacity of 20,000 tons.

(3) The station of the Romano-Americana has three tanks of a capacity of 12,000 tons.

During the past year the following State installations have been established:—

The installation which previously was utilised as an export installation is now only a warehouse and pumping station.

A new station has been established for the reception of petroleum tank cars, and for this the estates situated on the hill overlooking the old installations have been acquired. The petroleum trains received there empty their contents into four auxiliary reception tanks, and from these by means of pipe lines laid on metal bridges constructed over the tanks, the oil passes into these by the sole force of gravitation.

At the suggestion of different companies, and to help the development of the export of the petroleum residuals, four tanks of a capacity of 4,000 tons each have been erected for receiving the residuals, and three boilers capable to produce 5,000 cubic metres of steam per hour each have been erected for liquifying the residuals, and thus diminishing their viscosity, allowing them to easily pass into the other tanks. All these works are now practically completed.

A petroleum basin is being completed, which will allow the loading of three steamers at the same time, and in view of avoiding the possibility of fire, the tank steamers will enter the harbour not by means of steam, but by means of electrically-driven cables, the installation of which is already completed. Proper installations for sheltering the officers of the steamer in loading and her crews are being erected, and when the loading of a steamer is completed, she again will be driven out of the loading station by means of other electric cables to special platforms, where she can re-light her fires, and then go out of the port under steam.

There will be at the interior of the oil dock a special embankment for loading of drums, and special platforms for the filling and storage of these.

In addition, there has been erected a separate embankment for coal and timber.

For the present, and until new orders, private installations have been dispensed with altogether.

The constructional works at the port of Constantza have been executed under the direction of the general inspectors, Engineer T. Pasla, chief administrator of the petroleum installations, and Engineer Laurent C. Erbiceano.

Petroleum Loading Station at Braila.

At Braila the petroleum installation formerly belonged to the Aurora, bnt is now in possession of the Credit Petrolifer. It is composed of ten tanks, of a total capacity of 22,500 tons, and the principal products stored in them are illuminating oil and residuals. The

Braila installation is at present the only installation in the country for residuals, for that at Constantza is not yet completed. It consists of a jetty for mooring of tank steamers, and possesses two tankers of a carrying capacity of 1,500 tons each, in which the oil is transported to Louerna, where it is pumped over into tankers of larger tonnage. In 1903 there were exported from Braila 2 ,000 tons of petroleum products, as against 17,000 tons in 1907 and 26,000 tons in 1906.

At the port of Giurgevo the Steaua Romana possesses an export installation of six tanks of a total capacity of 6,300 tons, and six pipe lines bringing the oil into the tanks on the Danube. The Steaua Romana here owns five tankers trading on the high Danube up to Budapest and Rabisbonne, where there are transport stations. In 1908 the Steaua Romana exported from Giurgevo about 18,000 tons, almost all benzine. The larger part of the export of the Steaua Romana, however, is being made from Constantza.

The Société Trajan has at Cernavado a refinery with a jetty on the Danube, and different steamers plying on the Danube here load barrel and case oil, which the company sends over all along the high Danube.

At different railway stations in Roumania there are 330 tanks of about 150,000 tons capacity, and 1,150 wooden reservoirs of 50,000 tons capacity. In the refineries there are 65 iron tanks for crude oil of a total capacity of about 80,000 tons, and 750 iron tanks for products, besides 110 wooden reservoirs for crude (capacity 2,800 tons), and 990 wooden reservoirs for products of about 16,000 tons.

There are distributed over the Roumanian railways 2,003 tank waggons, the cost of which may be estimated at 12,000,000 francs. Of these, 238 belong to the general administration of the railways, and the rest to the different companies, but in 25 years' time they will all be in the possession of the State.

Taking an average specific gravity of crude oil at 0·900 and that of products at 0·800, and reducing the cubic metres to tons, we find that the total storage capacity for oil in Roumania to-day is close upon 700,000 tons.

THE ROUMANIAN PETROLEUM REFINERIES.

OPERATIONS DURING FEBRUARY.

The quantity of crude oil treated by the Roumanian refineries in February amounted to 78,448 tons. The output of products was as under :—

	Tons.
Benzine	14,010
Illuminating oil	19,632
Lubricating oil	3,216
Residuals	40,315
Total	77,173

The quantity of petroleum products delivered from the refineries in February for home consumption were :—

	Tons.
Benzine	950
Illuminating oil	3,288
Lubricating oils	1,130
Residuals	28,037
Total	33,405

In addition, a quantity of 9,149 tons of residuals was used as fuel at the refineries.

The stocks of various petroleum products at the end of February were :—

	Tons.
Benzine	48,355
Illuminating oil	39,552
Lubricating oil	22,043
Residuals	52,278
Total	162,228

The output of paraffin scale for the month was 95 tons; deliveries for home consumption, 64 tons; stocks at end of the month, 59 tons.

ROUMANIAN PETROLEUM PRODUCTION DURING FEBRUARY.

The production of crude oil at the Roumanian oil fields during February, according to the detailed statistics published by the *Moniteur du Petrole Roumain*, amounted to 89,276 tons. The final figure, when completed by the output of some firms, will probably be about 90,000 tons.

The production of the various fields in February as compared with the figures of January were :—

	Feb. Tons.	Jan. Tons.
Prahova District—		
Bustenari-Calinet-Burloi	32,936	33,605
Campina-Poiana	18,528	18,565
Moreni	27,520	23,842
Baicoi-Tintea	4,193	4,545
Other Fields	430	729
Total for Prahova District ..	83,607	81,286
Dambovitza District	2,157	2,574
Buzeu District	1,920	1,741
Bacau District	1,586	1,485
Total	89,270	87,086

The production of the leading firms during the month, compared with that of February, was as under :—

	Feb. Tons.	Jan. Tons.
Steaua Romana	26,627	25,784
Regatul Roman	13,612	16,024
Concordia Co.	10,275	12,112
Romano-American Co.	11,740	8,220
Astra Co.	4,798	4,063
Trajan Co.	3,150	3,102
International Co.	2,500	2,542
Colombia Co.	2,898	2,748
Aquila Franco-Romana	1,724	1,696
Nafta Co.	1,051	1,609
Seceleanu Bros, ...	1,506	1,444
I. Koster	1,101	1,270
A. Van de Werk	—	891
Anglo-Roumanian Petroleum Co. ..	660	742
Alpha Co.	920	738
Arnheemsche Petroleum Co. .	531	509
Olandeza-Romana	—	613

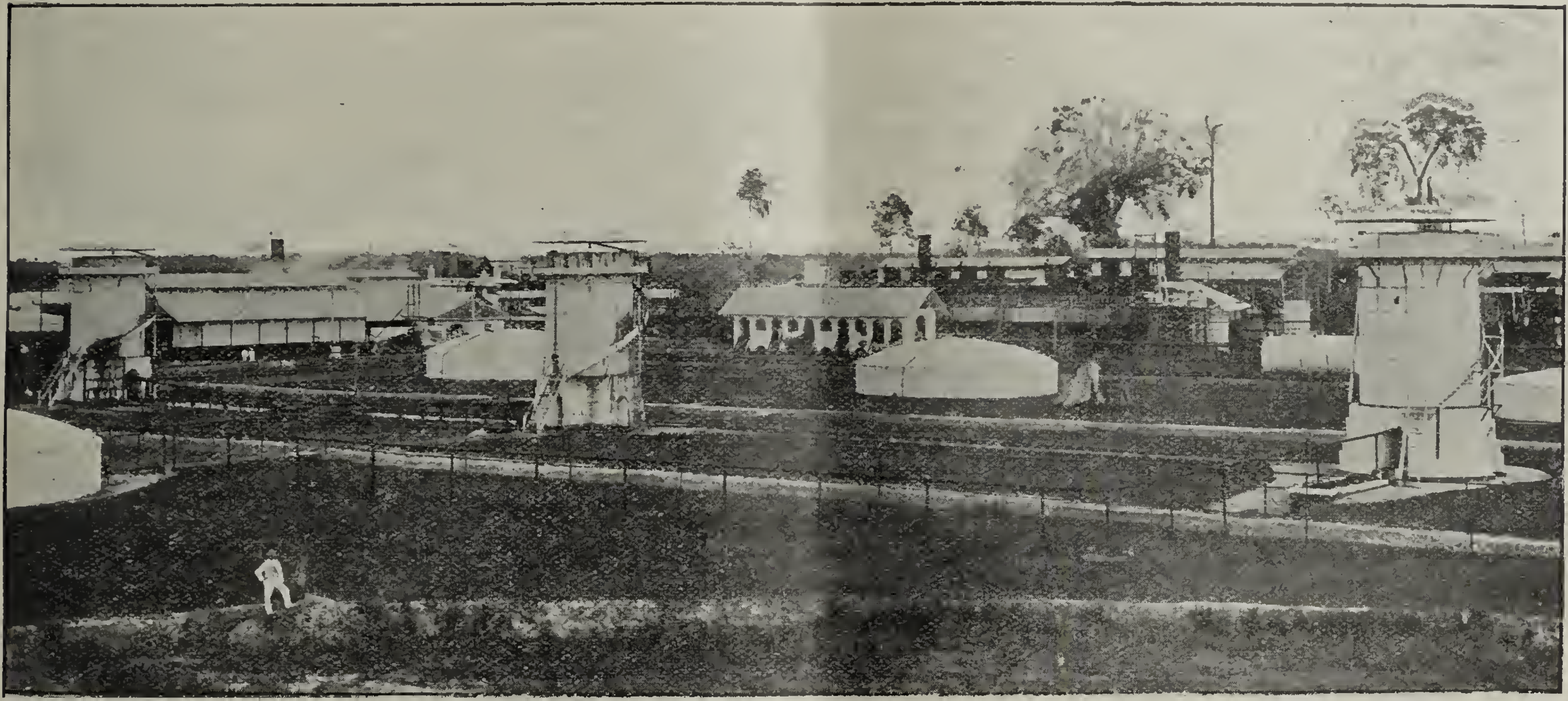
NIGERIA BITUMEN CORPORATION, LIMITED.

The Manager cables from Lagos as follows :—Borehole No. 5 : depth 1,089 feet ; increase 10 feet. Borehole No. 6 : depth, 1,033 feet ; increase, 101 feet. Borehole No. 7 : Putting in 6-inch casing. Borehole No. 8 : depth 190 feet ; increase 85 feet ; formation, soft green shale. Borehole No. 9 : fishing.

The Koninklyke Nederlandsche Petroleum Maatschappij.

A SHORT DESCRIPTION OF ITS COMMERCIAL ORGANISATION.

A pamphlet recently published in Amsterdam gives a very interesting sketch of the organisation and working of the petroleum enterprise Koninklyke, which has also an interest in the petroleum business of the Astra Co. The details have been furnished by Mr. H. A. Detterding, the general director of the company, and will, therefore, be recognised as authentic. The capital of the company in placed shares is 40,000,000 Dutch florins (£3,360,000), calculated at the actual market value (370 per cent.) these shares represent a total value of 148,000,000 florins; and even this does not include the value of the preference shares. The business of the company extends over half the world. The products obtained from the crude oil in the refineries at Sumatra, Borneo, and Java are sold by its own branch companies and its agents in the whole of East Asia, in Australia, and in Europe. Although the organisation of the company is not as large as that of the Standard Oil Co., it is, nevertheless, a most important factor in the petroleum trade.



The Company's New Refinery at Penkalan-Berandan.

In Asia, in Africa, in Australia and Europe, the company possesses in sixty of the most important ports oil tanks and installations for distribution of its products. At Rotterdam it owns the largest benzine installation in the world, and maintains a regular import of benzine, of which last year it imported 60,000 tons, while the company's fleet in the East of Asia bears comparison with the large navigation companies.

The extent of business done by the company can be best appreciated from the fact that it has permanently in Holland and elsewhere sums of money varying from 10,000,000 to 20,000,000 florins. To-day, the Koninklyke Co. occupies a front place in petroleum industry and commerce, yet it is still growing and developing.

In 1907 the Koninklyke, in conjunction with its auxiliary companies, sold 864,000,000 litres — about 200,000,000 gallons—of petroleum products, yielding a total profit of 20,000,000 florins, including the profit from the other products. If this quantity of products had been sold at a price of only 2½ cents per litre less than the price obtained, there would have been a loss of several million florins. Thus it will be seen that the most important factor in the success attained by the company consists in the excellence of the organisation for its distribution and sale; or in other words, in the able commercial policy of having its eyes open on all competitive movements.

With regard to the oil properties of the company, these are situated mostly at Sumatra and Borneo. To the north of Sumatra, the company manages first of all its own lands at Telega Said, then the properties of the petroleum companies, Perlak and Zuid Perlak, and the Pedawa fields. To the south of Sumatra, in addition to its own fields, which are the richest in the district, it exploits the properties of the petroleum companies—Moeara-Enim, Sumatra-Palembang, Moesi Ilir, of the Indian Exploitation Co., the Nederlandsch-Indische Exploitatie Maatschappij, and of the Exploitatie Maatschappij Nederland. At Borneo, the company manages the properties of the Oost Borneo Co., the Menten concession and the fields of the Nederlandsche Industrie en Handel Maatschappij and Tarakan, while at Java the company also possesses large petroleum fields.

The Koninklyke has three refineries situated at Penkalan-Berandan, in the north of Sumatra, at Palembang in the south of Sumatra, and at Koetei in Borneo. With regard to sales and the fixing of prices, the company has entered into agreements with some independent producers at Sumatra and Borneo —

Dordtsche Petroleum Maat. and Maat voor Mijn. Borchen Land Exploitatie de Langkat. Of the installations, one is situated in the interior of China at a distance of some hundred kilometres from the coast. The Koninklyke is selling its illuminating oil in Japan and up east, and from South Australia up to Alexandria up west, while its benzine goes principally to Europe. Notwithstanding the enormous competition on the benzine market in the different parts of the world, the general manager of the Koninklyke—Mr. Detterding—thinks that the company could never be harmed in the benzine trade, as it is marketing the largest possible quantity of benzine in one hand, so that the sale and distribution expenses are of the smallest, while the production is on such a large scale that no competitor could supply the product cheaper.

Mr. Detterding declares that there are no agreements signed between the Koninklyke and the Standard, but there exists a kind of silent understanding that each of them has to respect the territory on which the other has the more chance of success, so that competition may appear only accidentally and then when both companies are able to sell at a profit at the same prices.

The management of the Koninklyke is divided into three parts. The Bataafsche Petroleum Maat. possesses the fields and refineries in its own name or in the name of the Koninklyke and supplies the products to the tank steamers. From this moment, these products are under the management of the Anglo-Saxon Petroleum Co., which manages their transport into the destination ports, where it gives them over to the Asiatic Petroleum Co. This concern occupies itself with the distribution and the sale, and if the supply of the Bataafsche is not sufficient to satisfy the demands, the Asiatic negotiates with, and buys from, other producers as well. All these three companies are operating separately one from another, are under separate administration, and publish separate balance sheets.

The capitals of the Bataafsche and the Anglo-Saxon are distributed between them in the proportion of 60 per cent. in the hands of the Koninklyke, and 40 per cent. in the hands of the Shell Transport and Trading Co., of the capital of which latter, the Koninklyke, in its turn, possesses 25 per cent., so that directly and indirectly the Koninklyke possesses in the Bataafsche and the Ango-Saxon 70 per cent., while of the capital of the Asiatic Petroleum Co., which is about £900,000, two-thirds belongs to the Anglo-Saxon and one-third to the Caspian Society. This latter company is controlled by the Rothschild group. Good relations are maintained with the Standard Oil Co. and the European Petroleum Union, which, as is known, is an organisation concentrating the petroleum business of the Deutsche Bank, and, consequently, of the Steaua Romana.

The Koninklyke and the Shell are thus but holding companies. The division of the sphere of activity between the Bataafsche, the Anglo-Saxon and the Asiatic is regulated over the whole extent of the territory of sales. Thus the part of the Geconsolideerde Hollandsche Petroleum Co., which detains the shares of the Astra of Roumania, controlled in its turn by the Koninklyke, is in the hands of the Bataafsche, while the Asiatic is occupied with the sale of the largest part (about three-fourths) of the Roumanian production of benzine. The companies themselves maintain the risks of insuring their different properties. For this purpose they created a special reserve fund, which at the end of December, 1908, was over 3,000,000 florins. In the same year, the insurance reserve was added to by 2,000,000 florins, although the total damage did not exceed 165,000 florins.

In each of the three refineries, over 1,000 tons are regularly worked every day, and the products find an easy sale. For benzine only, the production surpasses the demand. The Koninklyke has always followed a prudent policy of reserving considerable sums in cash and also of investing very considerable sums of money for geological researches and exploration of new fields. Thanks to this prudent policy pursued for the last ten years, the reserves have increased to such an extent that there is every year left over after payment of dividends a sum of at least 6,000,000 florins.

We have been treating the Koninklyke as of the only importance. Of course the business of the Koninklyke is divided between the three different companies, of which one has got to do with exploitation, the other with the distribution, and the third with the sale. But practically the whole business may be identified with the Koninklyke, as it participates to the extent of 70 per cent. in the exploitation, and the management of the three companies is, in fact, in its hands. The three delegates of the Bataafsche are all three directors of the Koninklyke; of the three members of administration of the Anglo-Saxon two are directors of the Koninklyke, and the general director of the Asiatic is at the same time the general director of the Koninklyke.

CLASSIFIED IMPORTS INTO UNITED KINGDOM UP TO APRIL 3rd, 1909.

IN GALLONS.

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Country.	Illuminating.		Lubricating.		Residuals.		Gas Oil. (Solar)		Benzine.		Fuel Oil.		Other Descriptions.		Totals.	
	Since Mar. 22.	From Jan. 1.	Since Mar. 22.	From Jan. 1.	Since Mar 22.	From Jan. 1.	Since Mar. 22.	From Jan. 1.	Since Mar. 22.	From Jan. 1.	Since Mar. 22.	From Jan. 1.	Since Mar. 22.	From Jan. 1.	Since Mar. 22.	From Jan. 1.
Austria ...	—	—	—	24,930	10,120	149,850	—	—	—	—	—	—	—	—	10,120	174,780
Belgium ...	—	70	17,420	177,980	—	—	—	—	—	—	—	—	—	—	17,420	178,050
Canada ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dutch India.	—	400	—	—	—	—	—	—	—	5,661,890	—	80	—	80	—	5,662,450
Germany ...	14,230	209,160	27,630	260,500	—	2,000	—	—	—	—	—	—	—	4,640	41,860	476,300
Holland ...	—	300	—	1,460	—	—	—	—	—	1,087,710	—	—	—	13,800	—	1,103,270
Roumania ...	—	3,605,450	—	—	—	—	—	2,191,800	—	938,360	—	—	—	—	—	6,735,610
Russia ...	749,090	6,335,050	1,468,070	1,881,660	119,750	119,750	—	—	—	886,540	—	—	3,160	63,780	2,340,070	9,227,250
U.S.A. ...	1,315,540	33,696,960	1,569,600	11,866,020	15,720	39,320	2,776,100	15,708,830	—	5,320,240	229 430	3.229,890	49,720	1,223,380	5,956,110	71,144,170
Other Countries	800	800	930	10,450	—	—	—	1,000	—	887,380	—	240	—	1,600	1,730	901,470
	2,079,660	43,848,190	3,083,650	14,223,000	145,590	310,920	2,776,100	17,901,630	—	14,782 120	229,430	3,230 210	52,880	1.307,280	8,367,310	95,603 350

THE LONDON AND THAMES HAVEN OIL WHARVES, LIMITED.

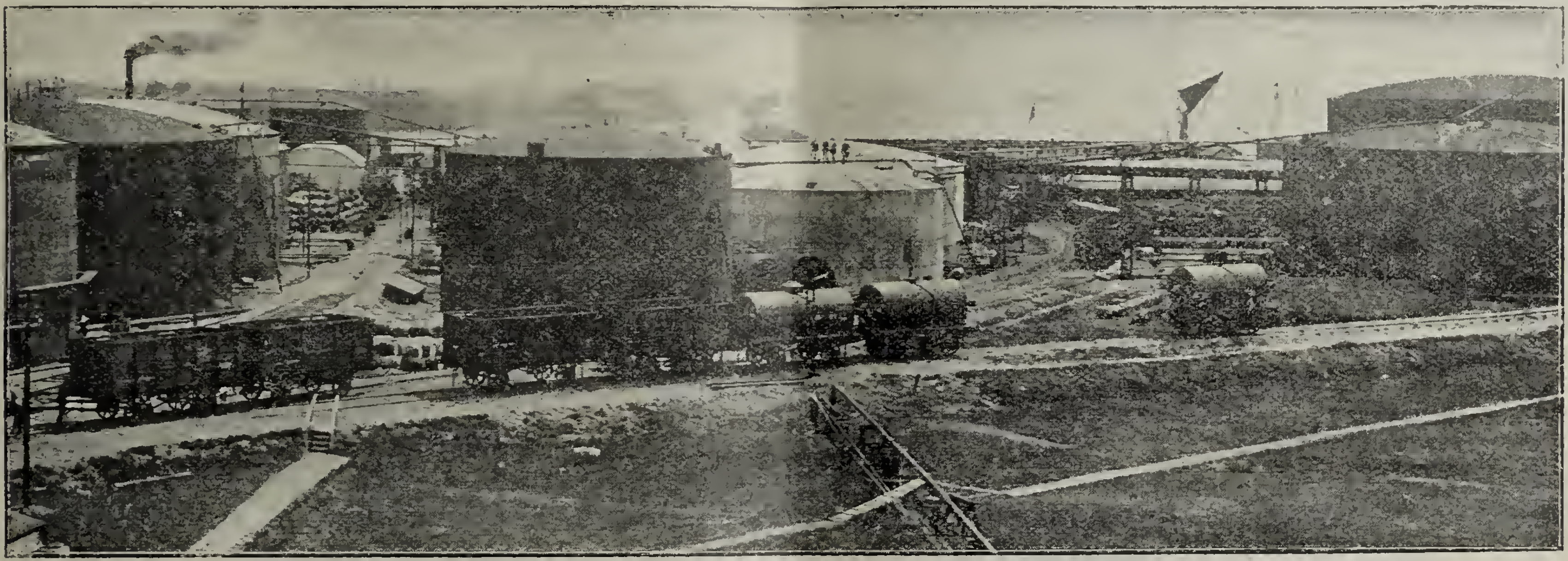
ELEVENTH ANNUAL MEETING.

The eleventh annual meeting of the shareholders of the London and Thames Haven Oil Wharves, Ltd., was held at the Baltic, London, E.C., on Wednesday week, the company's chairman—Mr. Owen Philipps, M.P., presiding.

Mr. T. C. J. Burgess, the Secretary of the company, read the notice convening the meeting, and also the report of the auditors, after which the report of the directors, which appeared in the last issue of the Review, was taken as read.

In moving the adoption of the report and balance sheet, the Chairman said:—We again have what I think you will all consider a very satisfactory balance sheet to lay before you. This is the third year in succession in which we are able to recommend a dividend at the rate of eight per cent. per annum, and in the eleven years since the company took over the business we have been able to pay to the ordinary shareholders an average dividend of 7½ per cent. You will notice that, for the first time in the company's history, no debentures or loans appear in the balance sheet, the whole having been paid off during the past year, when they fell due. The share capital is now £170,000, of which £20,000 is in preference and £150,000 in ordinary shares. The history of this company has been one of steady progress. The board have always attempted not only to meet the requirements of the trade, but to forestall the requirements of the great trades with which we are connected—*i.e.*, both the oil and spirit trades. We have recognised our duty as a company to the trade as a whole. We have recognised the necessity of keeping our charges as low as possible, and this is only possible owing to the enormous amount of goods handled every year. We recognise that this company is the servant not only of the large importing trades, but also of the small traders, whose interests naturally require to be looked after. Shareholders who have not already done so would, in my opinion, spend a very profitable day if they visited the company's installation of tanks, etc., at Thames Haven. The company now have some 57 tanks there, forming one of the most noticeable objects on the river Thames, below Tilbury.

As most of you know, this company does not own a gallon of oil. It does not purchase or sell oil or spirit. We handle spirit and all kinds of oil and other liquids. We store, blend, compound, distil, and refine for our customers, large and small. We have a practical staff and a competent chemist to look after our interests and the interests of our customers. For several years I have alluded to our interest in the motor industry. As you all know, this industry has continued to make rapid strides, and our principal place at Thames Haven is ideally situated for handling the motor-spirit trade. We have endeavoured always to conduct the operations of this company in a broad public spirit. We recognise that the spirit trade, if unregulated, might lose many of the advantages it now possesses at Thames Haven, and might become a source of danger not only to shipping in the river, but to the whole community. You know that we have always handled liquid fuel at Thames Haven, and, owing to our position at the mouth of the river and our accommodation—steamers of the very largest size being able to lie alongside our wharves—the company will always be in a position to hold its own in the liquid fuel trade. In this connection I regret to say that Sir Marcus Samuel, who was one of the pioneers of the liquid fuel trade, has retired from business. We wish he may long enjoy his well-earned rest. It has always been our effort in the past, and it will be in the future, to keep your business right up to date, and to see that it is managed with efficiency and economy. I shall be pleased to answer any questions, and I now beg to move: "That the report and accounts for the year ended December 31, 1908, now presented, be adopted, and that a dividend on the ordinary share capital of the company at the rate of 8 per cent. per annum, less income-tax, be, and the same is hereby, declared payable out of the profits of the company for the year ended December 31, 1908, partly-paid shares pro rata on amounts paid up from date of payment, and that the same be paid less the sum paid in advance of such dividend."



A Glimpse of the Storage Tanks at Thames Haven.

Mr. Allan McCall seconded the motion.

Mr. S. H. Leonard said the report was certainly very satisfactory, as many of the shareholders had anticipated; but they had also anticipated the natural corollary of a dividend of 10 per cent., as in the years 1901-4. At the previous meeting the chairman had stated that the appropriation to reserve, £3,500, was a larger amount than usual. They might now add an equal amount to the reserve and still pay 10 per cent. on the ordinary shares without in any way impairing the company's ability to fulfil its financial obligations. It might be said that they should be cautious, the past year having been very favourable; but if rumour spoke truly, the business during the last three months had been more prosperous than ever. He understood that the company's resources at Thames Haven had been taxed to the utmost, and, under the circumstances, many of the shareholders would have been glad if the distribution had been larger even than the very generous one proposed, for which they were properly grateful. He regretted that the debentures had been paid off and the number of ordinary shares so largely increased. Had the debentures been renewed they might perhaps have had a larger dividend; and in the absence of debentures many investors who would have been attracted to invest in the company were unable to do so.

Mr. B. H. Evans said he agreed with the previous speaker, except that he congratulated the board on having got rid of the debentures. The company could afford to do without them and to pay a dividend of 10 per cent. as well.

The Chairman, in reply, said, with reference to the suggestion that a larger dividend should be paid, that the board felt that the reserve fund should be still further strengthened. A dividend of eight per cent. was a very fair one in times when trade was none too brisk, and it was wise to take advantage of a good year to strengthen the company's position. They had therefore added £5,000 to the reserve fund, which, coupled with the fact that all the debentures had been paid off, undoubtedly placed the company in a position it had never occupied before.

The resolution was carried unanimously.

The Chairman proposed the re-election of the retiring director (Mr. Allan McCall), which was seconded by Mr. F. H. Simmonds and unanimously agreed to.

On the motion of Mr. J. Lamont, jun., seconded by Mr. G. Mordaunt, Messrs. Fookes and Co. (the auditors) were reappointed.

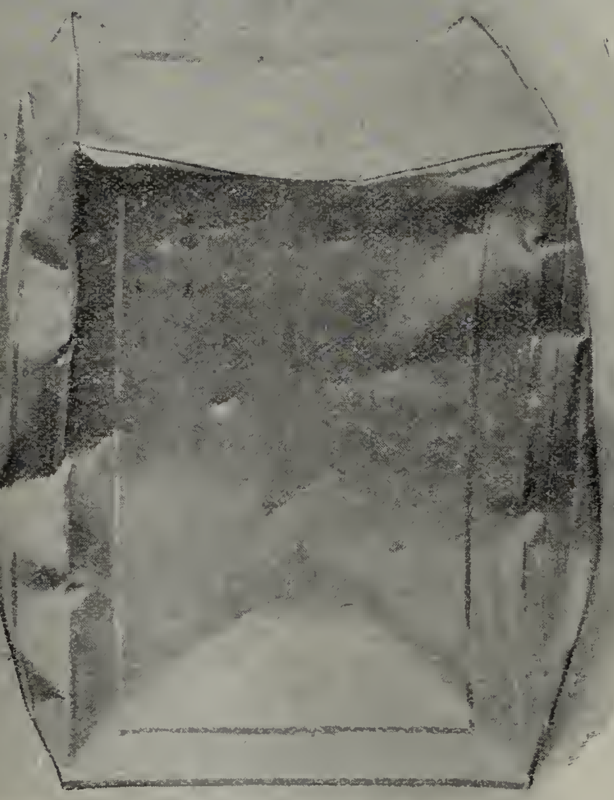
Mr. J. S. Austen then drew attention to the question of the directors' fees, which at present were £500 per annum. He was under the impression that this rate of remuneration had been fixed when the company had a capital of £75,000. He had no figures shewing the turnover, but he had paid periodical visits to Thames Haven, and judging by the tankage accommodation, he would say that the business must have quadrupled between the time when the company took it over and his last visit, about two years ago. At its inception the company paid three per cent. on its shares, but that gradually improved, and the dividend became 10 per cent. Afterwards it dropped to five per cent., and had since continued on an eight per cent. basis, as he hoped it would do in perpetuity. Instead of paying a bonus of one or two per cent. occasionally, he hoped that the directors, if they found they had a large amount of money which was absolutely unemployed, would make a big distribution—perhaps 10 per cent. He thought the time had now arrived, looking to the services of the directors in the past, their present duties, and the manner in which they performed those duties, when their remuneration should be increased.

The Secretary stated that it was within the power of the company in general meeting to alter the remuneration of the directors; in fact, it had been done on a previous occasion.

Mr. Austen then moved, that the remuneration of the directors should be £900 per annum, and this was unanimously agreed to, a hearty votes of thanks to the chairman for presiding concluding the proceedings.

CAN-MAKING PLANT.

American "Hemmed-edge" Can, showing how easily the end can be forced off.



"Rhodes" "Double-seamed" Can, after being heavily hammered the ends are just as firmly attached.

DOUBLE SEAMED CANS, as made by "Rhodes" Patent Machinery, are produced at **same or less cost** in every respect as the "Hemmed-edge" Can.

Sole Makers— **J. RHODES & SONS, Ltd.,** Grove Iron Works, WAKEFIELD, ENG.

MISCELLANEA.

ESTABLISHMENT OF A SPECIAL PETROLEUM DEPARTMENT IN BAKU.

THE RUSSIAN GOVERNMENT FOLLOWS AMERICA'S EXAMPLE.

Matters in connection with boring operations in the Baku district have formerly been under the control of the Caucasian Mining Department, the head office of which was in Tiflis (about 350 miles from Baku). Consequently the Mining Department has not been in close touch with the industry, and naturally the latter has suffered much inconvenience and delay. The Government has now decided to establish a special petroleum department in Baku, under whose guidance petroleum lands will be allotted. This department will also have control of boring operations, the working of the refineries, etc. The scope of the petroleum mining department will be divided into five districts—Baku, Apscheron, Transcaucasia, North Caucasia, and Central Asia. This step will, doubtless, assist the development of the oil fields to an extent which has been impossible hitherto.

◆

GERMAN PETROLEUM IMPORTS FOR JANUARY AND FEBRUARY.

The imports of the principal petroleum products into Germany from the various petroleum producing countries during January and February were:—

JANUARY.

Country.	Illum. Tons.	Lubric. Tons	Benz. Tons	Gas Oil. Tons.	Crude Oil Tons.
U.S.A.	124,574	7,578	—	—	398
Austria-Hungary ..	26,132	1,772	1,125	2,225	247
Dutch India ..	—	—	9,234	—	107
Roumania	589	—	1,246	—	—
Russia	6,287	79,067	159	—	—
Other countries ..	—	86	—	—	—
Totals ..	157,582	88,503	11,764	2,225	752

FEBRUARY.

Country.	Illum. Tons.	Lubric. Tons.	Benz. Tons.	Gas Oil. Tons.	Crude Oil Tons.
U.S.A.	18,304	5,276	—	—	1,718
Austria-Hungary ..	13,851	1,547	1,280	2,530	450
Russia	2,516	5,430	572	—	—
Dutch India ..	—	—	5,571	—	91
Roumania	478	—	587	—	—
Other Countries or of unknown origin	—	153	—	—	—
Totals ..	97,149	12,406	8,012	2,530	2,259

◆

GULF COAST PETROLEUM SHIPMENTS INCREASING.

American Government statictics, just to hand, shew a very noteworthy increase in shipments of petroleum and its products from Gulf Coast ports. The aggregate from Sabine, Texas, from which the principal outlet is afforded, as will be seen from the table upon another column, reached 8,346,714 gallons for February, against 5,449,649 gallons for the corresponding month last year. The total exports from Sabine were 97,860,636, and 47,117,794 gallons for the eight months ending February, 1909, and 1908, respectively. The most material gain was in illuminating oil, comparative figures being 44,849,126 gallons for the more recent period, against 15,538,307 gallons for the earlier period. The export movement in naphthas from Sabine for the eight months ending February, 1909, totalled 1,467,033 gallons. The amount for the corresponding period of the previous year was not recorded. February statistics of shipments from Port Arthur, Texas, also shew an impressive aggregate, particularly in refinery products, of which 365,311 barrels are recorded for the month. Of this amount 303,829 barrels are credited to the Gulf Refining Co. This company was well in the lead in vessel shipments of refinery products from Port Arthur during 1908. The aggregate in its favour for the twelve months was 2,231,267 barreis. For the same period the Security Co. shipped 1,294,406 barrels, and the Texas Co. 844,861 barrels.

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AMERICAN GUNBOAT'S TRIALS ON LIQUID FUEL.

The illustration here given is that of the United States Government boat, "Monitor Cheyenne," which has recently concluded a series of trials upon liquid fuel. The reports state that the vessel came through the various tests in a remarkably successful manner, thus shewing the great superiority of oil over coal.

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THE ITALIAN GOVERNMENT AND LIQUID FUEL.

IMPORTANT STEPS TO BE TAKEN.

The Russian *Board of Trade Gazette* publishes some information regarding rumours that the Italian Government are negotiating with a view to exporting petroleum residuals from Batoum, chiefly with a view of using liquid fuel for their fleet. This step should certainly prove of the greatest importance to the Russian industry, as, until the present, the export of residuals from Batoum has been comparatively small, as the following table shews:—

Year	Poods.	Year.	Poods.
1900	1,503,000	1905	369,000
1901	1,011,000	1906	1,051,000
1902	1,471,000	1907	1,918,000
1903	985,000	1908	2,068,000
1904	1,379,000		

During the present year the export of residuals has increased enormously, for up to the 20th March no less than 987,000 poods were exported. The increased demand for residuals should prove of advantage, not only to the petroleum industry, but also to the Caucasian Railway, for, as is known, since the opening of the refined oil pipe line from Baku to Batoum a large number of tank waggons have been freed, and could be profitably used for the purpose of transporting the residuals.

The Italian Government has decided to secure four tank steamers from 8,000 to 10,000 tons capacity for the purpose of transporting its own liquid fuel supply.

TO PROTECT PETROLEUM-BEARING STRATA FROM INJURY.

CALIFORNIA'S NEW MEASURE.

A Bill has recently been introduced into the Californian legislature by Mr. W. R. Odon, a practical oilman and a strong supporter of the State's great oil industry, which aims at protecting the gas or petroleum-bearing strata in the Californian fields from injury by the introduction of a compulsory and sound system of water shut-off.

The principal sections of the Bill, which is commented upon favourably by oil producers generally, are the first three, which we herewith give fully as they are of special interest to all concerned with the production of petroleum. The sections read as under:—

It shall be the duty of the owner of any well that may be drilled in the State of California on lands producing or containing oil, gas or petroleum to properly case such well with metal casing in accordance with the most approved methods, and to land the casing in the clay or other water impervious strata or formation immediately underlying the surface water-bearing sands or strata, and if the well be drilled to a sufficient depth, to land the casing in the clay or other water impervious strata or formation underlying the oil-bearing strata and to effectually shut off all water overlying or underlying the oil-bearing strata and to effectually prevent any water from penetrating such oil-bearing strata.

It shall be the duty of the owner of any well referred to in Section 1 of this Act, before abandoning the same, to withdraw the casing therefrom and to securely fill such well with clay, earth or cement mortar or other good and sufficient materials, used alone or in suitable combination and thoroughly pack and tamp the same into such well to a point 100 feet above the upper oil-bearing strata, and while withdrawing the casing therefrom to effectually and permanently shut off and exclude all water underlying and overlying such oil-bearing strata.

It shall be the duty of the owner of any well referred to in Section 1 of this Act to keep a careful and accurate log of the drilling of such well, such log to shew the character and depth of the formations passed through or encountered in the drilling of such well, and particularly to shew the location and depth of the character of the water encountered from time to time, and to shew at what point such water was shut off, if at all, and if not to so state in such log, and to shew the depth at which oil-bearing strata is encountered, the depth and character of the same, and whether all water overlying and underlying such oil-bearing strata was successfully and permanently shut off so as to prevent the percolation or penetration into such oil-bearing strata; and within ten days after drilling operations have ceased on any well the owner shall file or cause to be filed with the county Recorder of the County in which such well is located a full and complete copy of such log, duly verified.

ANGLO-MEXICAN OILFIELDS, LIMITED.

The Manager cables from Mexico as follows:—Borehole No. 3: depth 1,082 feet; increase 82 feet; formation, soft grey shale; gas show, 1,033 feet. Borehole No. 4: depth 82 feet; formation, soft grey shale rock; small oil show.

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Benzine from 700 to 780 s.g. Petroleum Spirit specially distilled to specification. High Test Spirit for blending with and replacing Turpentine.
Swansdown, Snowflake, Mayflower, Shamrock & White Light Petroleum.
Hydrolene and all kinds of Petroleum Pitch.

AMERICAN NOTES.

The Gordon Oil Company.—A company under the above title has just been formed in Texas to commence operations in the Sour Lake district.

The Jennings Field.—The daily output of the Jennings field is now placed at about 7,000 barrels. The latest successful completion is a well belonging to the Producers Oil Co., which by the aid of compressed air is yielding approximately 300 barrels daily.

To go to Nigeria.—Five well-known oil drillers of Findlay, Ohio, have just agreed to proceed to Nigeria on behalf of the Nigerian Bitumen Corporation, Ltd., of London. The party left America at the beginning of last week for the scene of their new labours.

Standard Oil Company's Latest Acquisition.—It is reported upon good authority that the Standard Oil Co. has acquired a large tract of land facing the Mississippi River, at Baton Rouge, for the purposes of a storage installation or for refinery purposes.

A Costly Failure.—After being engaged in drilling a well upon its holdings in the Santa Maria field of California for two years, the Union Oil Co of California has declared it a failure, and have abandoned it. The well at the time of its abandonment was 3,900 feet deep.

Californian Pipe Line Runs of the Standard.—The *Oil Investors' Journal* states that, for the first time since California came to the front in oil, the Standard has made public the figures of its oil runs. These for February represent approximately 20 per cent. of the total production of the State.

The Texas Company Increases its Facilities.—The Texas Co. is increasing its facilities for handling petroleum at four distinct points in Oklahoma, Texas and Louisiana. The additional facilities will add at least 3,000 barrels to the daily capacity of the company's trunk line, increasing the same to over 20,000 barrels.

The Heywood Oil Company.—The annual meeting of the shareholders of this company will be held next week at Beaumont. After payment of dividend, it has been agreed that the surplus profits shall be devoted to the development of the company's Illinois holdings, and to the purchase of additional property in Oklahoma.

Pipe Line Stocks.—At the end of February there were no less than 14,700,000 barrels of oil in the stock of the various pipe line companies in the Pennsylvanian, Ohio, West Virginian, Indiana, and Kentucky oil states. This is the largest figure of stocks on hand since the beginning of 1906 when the total was about 15,000,000 barrels.

Increasing Gulf Coast Shipments.—Official statistics shew a very satisfactory increase in the shipments of petroleum and its products from Gulf coast ports. The aggregate from Sabine, Texas, from which the principal outlet is afforded, reached 8,300,000 gallons for February, as against 5,000,000 gallons for the corresponding period of 1908.

Another Good Well in Louisiana.—The Benedum-Trees Oil Co., of Pittsburg, has recently brought in its second test well in the Caddo parish, and it is producing about 500 barrels daily, while hopes are entertained that when it is deepened, its output will be considerably increased. The first well drilled on the tract a few weeks ago still holds up with 200 barrels daily.

The Associated Company's Report.—The annual report of this company has recently been circulated to its stockholders. The total earnings in 1908 were $2,099,191 as compared with $180,490 six years earlier. The total sales of oil for 1908 shew an increase of 6 per cent. over those of the preceding year, but the price per barrel averages 30 per cent. more, counting old and new contracts, and 100 per cent. upon many new ones. The company's production in 1908 was 10 per cent. over the figures of 1907, and the production itself cost 10 per cent. less.

PETROLEUM IMPORTS INTO THE UNITED KINGDOM DURING MARCH.

THE SHIPMENTS INTO VARIOUS PORTS.

The total imports of petroleum products into the various ports of the United Kingdom for March are published in the following table. The imports reach a total of 28,761,410 gallons for the month as compared with 32,874,820 gallons for February, and 31,960,400 gallons for January. The figures are as under, in gallons:—

Port.	Illuminating.	Lubricating.	Residuals.	Gas Oil. (Solar.)	Benzine.	Fuel Oil.	Other Descriptions.
Aberdeen	4,000	200	—	—	—	—	—
Barrow...	—	—	—	—	—	654,120	—
Belfast	—	720	—	821,000	—	—	—
Bristol	1,931,100	359,910	12,880	31,840	—	—	141,280
Cardiff	—	320	—	—	—	—	—
Dundee	480	2,000	—	—	—	—	—
Glasgow	—	237,990	—	—	—	—	1,130
Goole	—	780	—	—	—	—	—
Grangemouth	16,000	11,180	—	—	—	—	—
Grimsby	—	6,540	—	—	—	—	—
Hartlepool	—	1,440	—	—	—	—	—
Harwich	—	2,010	—	—	—	—	—
Hull	749,070	288,220	—	—	—	—	—
Leith	11,040	134,810	—	—	—	—	—
Lerwick	800	—	—	—	—	—	—
Liverpool	1,249,090	2,022,210	124,590	960,400	—	—	13,840
London	9,107,770	814,090	29,040	1,697,590	2,632,530	229,670	3,890
Manchester	1,863,210	1,009,590	—	539,200	—	985,920	3,360
Middlesboro'	—	1,080	—	—	—	—	—
Newcastle	—	13,640	—	—	—	—	—
Newport	—	9,140	—	—	—	—	3,000
Plymouth	—	420	—	—	—	—	—
Southampton	—	21,300	—	—	—	—	—
Swansea	—	4,980	1,000	—	—	—	—
Totals	14,932,560	4,942,570	167,510	4,050,030	2,632,530	1,869,710	166,500

RUSSIAN NOTES.

A Bebe-Aibat Spouter.—A well started spouting on the 28th March, on the property of Messrs. Nobel Brothers at Bebe-Aibat, and produced 300,000 poods of crude oil in the course of six hours. The well then became choked.

Grosny Shale.—We are informed that a movement has lately taken place in the Grosny district to exploit crude oil which contains nine per cent. of paraffin scale. This percentage is considerably above that derived from Galician, Pennsylvanian, or other crude oils.

Declining Production — Higher Prices: — The total production of the Baku fields for the first two months of this year amounted to 71,020,000 poods, whereas for the corresponding period of 1908 the production was 76,200,000 poods. Thus there is a considerable falling-off in the production, to the extent of 5,200,000 poods, with the natural consequence that the price of crude oil and other petroleum products has increased—kerosene has lately risen to 31 copecs and crude oil to 23-24 copecs. This increase in price is, undoubtedly, due to the great activity displayed in the export trade, for the exports from Batoum for the last two months have been 7,330,000 poods as against 2,479,000 poods last year.

Geological Maps.—The Baku Naphtha Association has for a long time had on order geological maps for the Bebe-Aibat district, and we are now informed that the delay in publishing these maps by the Geological Committee is owing to the fact that they have not yet completed their investigation of the various samples of strata which have been taken from 2,000 bored wells at Bebe-Aibat. Mr. Goloobitinoff, under whose direction the work has been carried out, expects to finish his task shortly, and then these most valuable and interesting maps will be published. With regard to the geological maps of Saboontchi, Balakhany, and Ramany districts, the work is expected to be completed before next year. The information received from the logs of over 2,000 wells will, naturally, be awaited with great interest.

Fixing the Prices of Petroleum Products.—The well-known shipowner on the Volga—Mr. V. F. Lapshine—recently presented a report at the meeting of the steamship proprietors on the Volga, on the subject of fixing the prices of petroleum products He suggested (1) that the price of crude oil should not be more than 18 copecs per pood; (2) the price of lamp oil should be from 24-28 copecs per pood; and (3) for residues 18-19 copecs. He also suggested that an excise duty should be imposed on the crude oil and at the same time the excise duty on refined oil be reduced from 60 to 40 copecs per pood. According to his calculations, not only will the consumers benefit to the extent of something like 20,000,000 roubles per annum, but the refiners themselves will have increase revenues, as owing to the difference in price of crude and kerosene, they would extract a larger percentage of kerosene from the crude than they have done hitherto.

ROUMANIAN NOTES.

At South Mislishoara the Concordia has struck oil at 311 metres, of a yield of sixty tons per day; the Trajan, in their wells 29 and 31, eighty waggons; and the Steaua Romana in well 149 obtains about sixty tons.

A Meeting of the Association of the Petroleum Producers lately took place, when a committee was elected to compose and address to the Ministry of Industry a report on the new project of the consolidation of the law on the petroleum industry.

Severe Competition is now in progress on the Roumanian home market in the sale of motor spirit, and in consequence prices have come down very low. This is stimulating consumption of this product, but at the same time has also appreciably cut down the profits of the refiners.

A Fire at Moreni.—On the 18th of March a fire occurred in well No. 2 of the Regatul Roman, which soon spread to a wooden reservoir on the property of the Astra Co., but thanks to energetic measures of the *personnel* of the two companies the fire was not allowed to spread over a larger area.

The Aurora Company's Prospects.—The prospects of the Aurora Co. now justify the most optimistic expectations. Mr. Witte, the general director of the company, has returned from Amsterdam, where he succeeded in bringing the Dutch shareholders to a more conciliatory policy.

Prolific Campina.—From well 117 of the Steaua Romana at Campina, an eruption of petroleum still continues, and a large production of oil is to be expected from this well, as is the case with all the wells in this zone. The Steaua Romana is very active in Campina, and is preparing to deepen its wells throughout the extensive area which it possesses.

A Monogram on the Petroleum Industry.—The Commission nominated by the Ministry of Industry has completed its work and submitted its report, which will be published. The monogram deals with the petroleum industry, and will consist of the following parts: (1) Geological and geographical history; (2) geology; (3) productivity; (4) motor power; (5) production of various products; (6) technicalities; (7) storage and distribution; (8) economics.

A New English Group in Roumania.—Mr. R. Van Sickle, a well-known gentleman in Roumania, since he was technical director of the International Co., from which he retired to establish a business at Hamilton, Ontario, in Canada, and W. Blake Rignall, engineer, member of the firm of Geo. S. Duncan and Co., Edinburgh, have visited Roumania as representatives of an important group interested in the petroleum trade of Roumania. These gentlemen have opened negotiations with several owners of lands at Bustenari-Calinet and Campina. Mr. W. Blake Rignall has left for London to report to his firm on the results of these negotiations, and on the situation of the enterprises to be bought.

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Exceptional facilities for the storage of all kinds of . . .
PETROLEUM PRODUCTS in bulk and barrels.
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THE
PETROLEUM REVIEW,
45, St. Mary Axe, London, E.C.
American Office: 150, Nassau Street, New York.

Saturday, April 10, 1909.

SHOULD PETROLEUM PRODUCTS BE TAXED?

Now that the Chancellor of the Exchequer is upon the look out for additional sources of revenue, so that his budget proposals may be able to shew additional income proportionate with the abnormal expenditure of late, it is reasonable to assume that a serious eye will be turned to several classes of imported goods which are capable of bearing their burden of taxation for Imperial purposes. In this respect, we hear upon very good authority that the question has arisen as to the taxation of petroleum products, and though naturally there is much speculation for and against the chances which oils have of escaping the eyes of Mr. Lloyd George, there is no doubt about it that petroleum products generally have loomed before the Chancellor as articles of large and ever-increasing consumption which might be able to bear their share of Imperial taxation.

We are aware that it has long been established as a rule that whenever there has been a suspicion of any particular trade interests being attacked for Imperial taxation purposes, a most determined effort has been made by the representatives of that trade in order to shew the Chancellor of the Exchequer how unjust such a proposed tax would act in practice, and how prejudicial it would be to the trade itself. We have in our mind's eye several such representations that have been made by various trades at the critical moment just preceding the the compilation of the budget proposals, and we recollect, too, how invariably successful have been those concerted actions to place before the gentleman responsible for the budget proposals, what would be the result of taxation in those particular directions.

Rumour has been busy in the city during the past few days announcing that petroleum products may possibly be called upon to assist in the direction of taxation, and in view of this, one would have thought that our large importing and distributing petroleum companies would have wasted not a single moment ere placing before the Chancellor of the Exchequer the exact facts of the case, and shewing whether it is feasible for petroleum products to be taxed. But we regret to say that with their usual lethargy, our large companies prefer to pay no heed to the warning spread abroad, and therefore they intend taking no steps which might induce Mr. Lloyd George to look elsewhere than to imported petroleum for revenue.

We recognise, however, that it is clearly our duty to point out the effect which taxation upon petroleum products would have upon the trade as a whole, and, at the outset, we have no hesitancy in saying that, if the tax were levied—no matter what the weight of the tax would in itself be—the damage all round would be very serious, and almost irreparable.

The suggestion is that the tax may be not upon any particular product of petroleum, but upon the whole, and consequently it behoves us to see the effect it would have upon the principal petroleum products imported. Let us first take illuminating oil, the largest consumer of which is the poor man in his cottage. Year in and year out, he burns the bright light of the ancients, and on an average—taking summer with winter—we learn that it costs him approximately one shilling per week for his light. From the mention of this fact alone, it will be apparent that if any appreciable tax were imposed upon illuminating oil—and for a tax to be of any practical assistance to Imperial needs, it would have to be, say, of a minimum of one penny per gallon - the working man would, after all, have to find it from his own all too scanty pocket, and the cost to him would be even more than his present tax on tea. A tax which directly hits the poor man is not a tax to commend itself either to the present or any Government; and, therefore, we believe illuminanting oil will in the future, as in the past, be a non-taxed necessity of the poor.

Turning to petrol, there are many (who are not consumers) who would urge the imposition of a further tax upon motorists. They evidently forget that the motor industry in this country has grown to its present important position by reason of the fact that it has been able to fall back upon a cheap, plentiful and untaxed motive power in petrol. We have only to look around us—to see the enormous number of commercial vehicles in our streets engaged for transport purposes—to recognise that, apart from its pleasurable aspect, the coming of the motor has given a great impetus to many branches of trade and transport which have been developed so rapidly owing to their motive power being untaxed. Some might argue that the owner of the pleasure car can well afford to pay for a tax upon his petrol. It has always been so; the man who silently bears one burden has to carry another. In the present case, however, it must be remembered that the pleasure cars in use to-day consume but an insignificant proportion of the total consumption of petrol, and so the industrial vehicle will have to bear nine-tenths of any tax. Therefore we doubt very much if the legislature would ever agree to seek in this direction for additional revenue.

Another petroleum product, whose wide consumption in this country is ever on the increase—lubricating oil—cannot be looked to as an article which can assist the Chancellor of the Exchequer out of his present difficulty. The greatest users of lubricating oil are the textile trades of Lancashire and Yorkshire, and if for no other reason, the present is not an opportune time to inflict an additional burden upon those who control our looms, seeing that it is stated from authoritative sources that the present depressed condition of trade in the spinning and weaving branches may continue for some long time to come.

As readers of the Review are aware, the English Government has been, and still is, purchasing large quantities of petroleum products for fuel purposes for the navy, it would certainly be contrary to the spirit of the present Government to make a distinction in regard to taxation purposes, between refined and semi-refined petroleum products. It would immediately savour very much of protective tariffs, and an abnormal state of affairs would be brought about, for it is safe to presume that before very long we should have petroleum refineries springing up in this country, in order that the semi-refined oil might come in duty free and be thoroughly refined here.

Some may argue that even in that case it would be easily possible to levy a tax which could be collected at the various refineries, but we are confident of the fact that the administrative organisation which would be necessary for the purpose would more than eat up the additional revenue brought in, and thus the Government would by its own policy defeat its own ends.

For the present, however, we are only looking into the future and drawing attention to what might be, if petroleum products were taxed. We can only hope that the wise counsels which generally prevail in those Government financial quarters, will recognise that to seek for revenue from imported petroleum products would be a very dangerous proceeding to the Government, and decidedly disastrous to the oil trade of this country, which, unfettered by vexatious taxation in the past, has now become quite an important and integral branch of international commerce.

MODERN METHODS OF OIL ILLUMINATION.

. . Interesting Lecture by Mr. Leon Gaster . .

A most interesting lecture was recently delivered before the Royal Society of Arts by Mr. Leon Gaster, a gentleman who has for a long time past devoted considerable energy to the study of the various kinds of illuminants upon the market, and whose name is well known to the readers of the Review.

Quite naturally, Mr. Gaster particularly referred to the claims of the oil light, and dwelt upon several modern principles of utilising this in order to achieve the best possible results.

Mr. Gaster explained that the ordinary petroleum lamp had often been unjustifiably condemned for certain defects which were not inherent in it, and could be avoided by suitable design. In country districts lamps were still so widely used that there was room for the careful study of the best methods of distributing and utilising the light produced; and that matter formed the subject of discussion at the International Petroleum Congress held at Bucharest in 1907, when papers were presented by M. Aug. Pihan and Herr Proessdorf, as well as by himself. A resolution was taken after the latter lecture that the Congress should study and decide upon a type of domestic lamp having the conditions of greatest safety and highest efficiency.

The question of safety indeed was a very vital one to the success of oil lamps.

The designer of any particular lamp had to take into account the nature of the petroleum which was intended to be used with it. For instance, a lamp intended for American oil would probably not be so satisfactory for use with the Russian variety.

Recognising that fact the Roumanian Government last year, for the first time, introduced legislation specifying the exact conditions to be fulfilled by oil used for illuminating purposes in that country.

A very interesting point had recently been touched upon by M. Guiselin, who demonstrated how greatly the light from an oil lamp was affected by the quantity of oil in the reservoir. An increase of 20 per cent. in the illuminating efficiency could be secured by keeping 700 c.c. of petroleum in the reservoir, instead of 500. That was due to the assistance given to the capillary action of the wick, by the higher level. Consumers were therefore recommended to keep their lamps well filled up.

Some very complete researches on the oil lamp as a standard, were communicated by Dr. A. H. Elliott at the second annual convention of the Illuminating Engineering Society last year. In the discussion the importance of careful attention to the wick was dwelt upon, one of the speakers referring to a new non-combustible asbestos type. A variety of non-combustible wick due to Dr. D. Monasch, and composed mainly of carborundum had recently been devised. That same authority had recently contributed a study of the ordinary kitchen oil lamp, and had pointed out that the reflector commonly provided with these lamps was of very little service.

The coming of the incandescent burner suggested a new method of utilising liquid fuels. It was soon realised that if a liquid illuminant could be vapourised and mixed with the correct proportions of air, it might be utilised to heat an incandescent mantle. One of the earliest methods of utilising petroleum, continued the lecturer, in that way was the Kitson system, according to which petroleum was compressed at about 50 lb. to the square inch, in a suitable vessel, forced through a soft brass tube of very small bore into a heating chamber, and subsequently through a needle orifice to a suitably designed Bunsen burner. That system had found a considerable field for lighthouse illumination, and in other cases where big units were essential.

The most recent example of the Kitson system, the Empire lamp sold in England by the United Kingdom Lighting Trust, was an entirely portable self-contained lamp, in which an improvement was introduced by arranging the heating vessel in a vertical position quite close to the burner instead of above it.

The Blanchard system again utilised paraffin in a form of self-contained lamp, equipped with an inverted mantle, a special feature being the existence of a second vapourising chamber in which the heavier fractions of the oil could fall and be vapourised by their close connection with the mantle itself. The use of an inverted burner, it was claimed, also enabled small units to be supplied with greater ease, lamps yielding from 75 to 1,200 candle-power being available. An ingenious and interesting device used in this lamp was the method of registering the level of liquid in the vapouriser, which must be entirely closed and so adjusted as to withstand many times the pressure which it was likely to experience. That consisted of a magnetic needle on the outside of the vessel, which was controlled by a magnetic float rising and falling on the liquid within. Such lamps were said to burn twenty hours without requiring attention.

Another ingenious method of applying vapourised hydrocarbon was exemplified by the Petrolite lamp, in which the air was sucked through a porous vessel impregnated with suitable hydrocarbons, a draught being provided by the use of a fairly long chimney. One advantage claimed for the lamp was its safety, for, if the lamp were over-turned and the chimney broken or displaced, the draught ceased, and with it the generation of inflammable vapour, and the lamp therefore went out. Another portable lamp referred to was the "Lucisca," of Messrs. Falk, Stadelmann and Co.

A considerable amount of interest had heen aroused of late in methods known as the petrol-air systems. They all depended on the generation of a mixture of petrol-vapour with air in suitable proportions, the air being passed through suitable vessels and carburetted by the illuminating vapour.

The machine by which that was accomplished usually consisted of a small hot-air engine, operated by the gas which it produced, together with a suitable blower, carburetter, and gas-holder; in some cases the motive power was supplied by a falling weight, which was newly wound up from time to time, or where available, water-power was utilised.

Such machines were designed with a view to being as easily controlled and as automatic as possible; once the engine was started, which should only take a few minutes, the apparatus, it was claimed, ought to continue its functions automatically.

Briefly, the main essential quality of all systems was that the mixture generated at the burner should have a proportion of about 1½ of petroleum vapour to 98½ of air, and that the composition of this mixture should be automatically maintained constant.

Naturally, the burners using such air-gas had usually to be of special design, and relatively small incandescent mantles were used.

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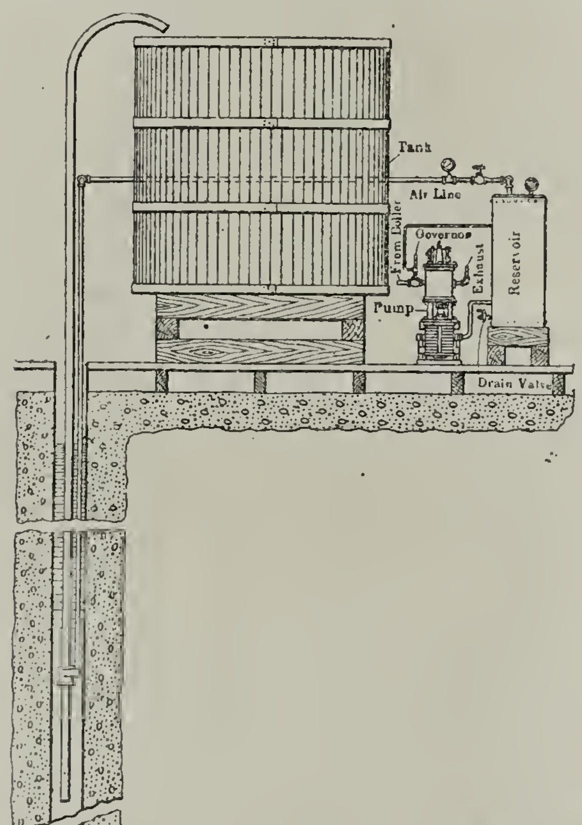
RAISING LIQUIDS BY COMPRESSED AIR.

Compressed air for the raising of liquids, especially from deep wells, is increasing on account of the simplicity of the system and the low cost of maintenance. In this method there are no moving parts; the only requirement is that the size, length and connections are properly designed so as to obtain maximum efficiency. Still, while pumping by compressed air is simple, the problem is better solved by tests than by mathematical calculations. The Westinghouse Air Brake Co., of Pittsburg, has, says the *American Engineering and Mining Journal*, lately completed a series of nearly 2,000 tests, covering a range of from 350 to 400 different conditions in deep-well pumping in order to obtain data concerning the amount of water delivered, air consumed, and the best proportions for and arrangement of piping and apparatus. The illustration here given shews the system as frequently installed by that company.



DETAILS CONCERNING THE GROSNY PETROLEUM INDUSTRY.

The *Neftiannoie Dielo* publishes the following statistics of the Grosny production since its inception:—

Year.	Poods.	Year.	Poods.
1883-92	3,256,000	1902	34,074,691
1893-95	14,431,055	1903	32,772,482
1896	17,200,151	1904	40,095,331
1897	27,568,794	1905	43,066,735
1898	18,502,359	1906	38,373,603
1899	25,222,565	1907	39,424,048
1900	30,690,768	1908	52,058,480
1901	34,888,872		

From the above table it is seen that the production of 1908 exceeded that of 1907 by 13,000,000 poods, or nearly 32 per cent. This is due chiefly to the fact that in 1907 only 5,373,850 poods of oil were the result of spouting wells, but last year no less than 14,316,915 poods were received from spouters only, or an increase over the previous year of 9,000,000 poods.

The chief producing wells have been as follows:—

Well No. 5, on Plot No. 40 of Spies Co., has given 4,200,800 poods (representing in value approximately £80,000); Well No. 6, Maximoff Co., 3,176,200 poods; Well No. 24, Akhverdoff Co., 2,927,000 poods; Well No. 3, Maximoff Co., 2,703,000 poods; Well No. 75, Akhverdoff Co., 2,828,000 poods; and Well No. 46, Akhverdoff Co., 1,964,700 poods.

The average daily output per well in 1908 was 1,500 poods, which is considerably above the average daily yield per well in Baku. On the 1st of January, 1909, there were in Grosny 258 wells, and on the 1st January this year 287, or an increase of 29 wells, although all of these have not been producing. The number of wells actually producing at the beginning of this year was 151. The total quantity of feet bored in the course of the past year was 63,420. The number of producing firms in Grosny in 1908 was 12.

The production by the chief firms for the year was as follows:—Akhverdoff, 21,834,200 poods; Spies Co., 11,762,555 poods; Maximoff, 6,130,335 poods; Anglo-Russian Maximoff, 4,070,055 poods; Kasbeck Syndicate, 3,500,000 poods.

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The Advance of Liquid Fuel.—The well-known French engineer, Mr. A. Guiselin, paid a visit to Roumania a few days ago, in order to study the question of supplying the French marine with Roumanian residuals. This visit is but a preliminary one for preparing necessary material for an official visit to Roumania of a delegate of the French Ministry of Marine.

Transportation of Residuals.—Arrangements have now been made by the Baku refiners for this season's navigation for exporting their products (chiefly residuals), and the firm of Nobel Bros. expect to export from Astrakhan about 67,000,000 poods, of which about half will be transported by their own fleet, and the remaining portion will be divided among various steamship proprietors. The average freight paid is the same as last year—5·8 copecs per pood from Astrakhan to Nijni.

A Splendid Policy.—The Standard Oil Co. of California has adopted a policy which is worthy of emulation. Upon the side of all its derricks in the Midway field it posts a notice giving details of the strata encountered, so that it may be studied by all interested persons. Much damage has been done to wells in this field owing to the water not being properly shut off, and this has been brought about by the drillers not having a proper log available of the local wells. The policy of the Standard is therefore of great value.

The Natural Gas Resources of the United States.

Government Report by Dr. David T. Day.

"The conditions favourable to the accumulation of gas reservoirs are in general the same as for petroleum. The two usually overlap. More or less gas is always found dissolved in crude petroleum, and the amount of gas obtained from a given pressure from a sand of slight thickness leads to the belief that the gas is dissolved in the petroleum under pressure, similar to the solution of carbonic acid in water. Reservoirs filled with dry gas are often found—almost always in the neighbourhood of petroleum fields—though beds of coal often yield natural gas even when far from oil wells, as in the anthracite mines of Pennsylvania, where gas is found more than 100 miles from the nearest petroleum pool.

"The areas in the United States, in which either natural gas or petroleum is the more valuable product, have recently been revised and now shews the following measurements in square miles:—

	Sq. Miles.
Alabama	40
California	310
Colorado	80
Illinois	50
Indiana	2,460
Kansas	550
Kentucky	290
Louisiana	110
Michigan	40
Missouri	70
Montana	40
New York	550
Ohio, Eastern	110
,, Western	165
Oklahoma	1,000
Oregon	20
Pennsylvania	2,730
South Dakota	80
Texas	130
Utah	40
Washington	70
West Virginia	1,000
Wyoming	120
Total	10,055

"The duration of high pressures in the known fields is very limited. There is no probability of the pressures exceeding 100 pounds per well after ten years. The rate of decline is a peculiar one. At first very rapid, it would be expected that the decline in pressure would follow a simple rate, but it does not. Many wells are still shewing a slight but appreciable yield by pumping them after the pressure became negligible. The yield from these low pressure wells is surprisingly persistent. Evidently the territory drawn upon by them is much larger than was expected. This industrial enterprise of pumping natural gas in order to utilise the entire supply is the most hopeful element in the outlook for a continued supply. It is this feature which made possible the use of a larger quantity of natural gas last year than the year before. The outlook is that natural gas will be utilised for as long a period as has already elapsed since the industry began, with the greater part to be furnished by the Mid-Continent field.

"Waste of natural gas will be divided into three classes. First, waste incident to the discovery of a natural gas field. Second, waste in oil production. Third, waste in consumption.

"It has been a common experience in the discovery of a gas field to encounter pressures so great as to lead to great difficulty in capping, and thus confining the gas until needed. Great instances of this were the Homewood well, near Pittsburgh, the Karg and Adams well in Ohio, the Caney Fork well, in Kansas, and, more recently, the wells of the Caddo field in north-western Louisiana. Individual wells among these have wasted as much as 25,000,000 cubic feet per day, or sufficient gas to supply the entire consumption of three cities the size of Washington, D.C. In the Caddo field at the present time, the waste of this character is estimated at 70,000,000 cubic feet per day. In this case, wells are drilled through the gas producing stratum in the search of petroleum, which is usually found a few hundred feet below. The natural gas is cased off, but, usually due to lack of skill on the part of the driller, actuated by indifference to the waste of gas, the gas escapes around the casing in increasing volume as the earth is loosened from around the pipe, and finally the force of the gas is sufficient to blow the case entirely from the well. This has happened in four cases already in the Caddo field. With a well thus 'blown out,' little effort has been made to close in the well. It has been the practice to set fire to the gas for an advertisement to the region.

"The production of more or less gas is incident to the drilling of all oil wells, and in most of them, at the time the petroleum-bearing sand is reached, the escape of gas is very great. Taken altogether, the waste of gas by this means is much greater and much more difficult to prevent than the waste from high pressure gas wells.

"In the first days of oil well drilling in Pennsylvania, natural gas was a nuisance and a menace to the oil producer. This menace became greater with the volume of the gas. It developed a hostility toward natural gas on the part of the oil well driller, which has increased rather than diminished up to the present time. It is to this hostility that the present waste of natural gas in oil regions is due. When natural gas was encountered in a sand above the expected oil stratum, it always cost considerable money to case it off and pack it in order to continue the drilling, and frequently caused explosions, tearing out the side of the well and occasionally blowing out the casing, causing the ruin of the enterprise. Every oil well now drilled includes in its outfit, pipes

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connected with a gas head for carrying the natural gas to a safe distance. Frequently it is burned to get rid of it, sometimes under the boiler to supply power for the well drilling. This practice has become so general that it is a common custom to pay $5 per 24 hours for the power for an oil pumping station. When the natural gas contains appreciable amounts of hydrogen sulphide with the consequent injury to health, its presence is proportionately less welcome.

"It is difficult for the oil well driller to obtain a prompt and profitable market for the natural gas, whereas with oil it is only necessary to connect the well to a tank, and the cash for the product can be obtained within a few hours. Occasionally, when the pressure due to natural gas is greatly relieved, oil is found. The oil well driller has accepted this exceptional case as a rule, and is apt to give all possible vent to the gas in the hope of its being followed by the desired petroleum. As to the amount of natural gas which is being wasted daily, no accurate statistics have been attempted, and the judgment of Dr. I. C. White, State Geologist of West Virginia, may well be accepted, to the effect that no less than 1,000,000,000 cubic feet of gas are wasted every 24 hours. Of this, undoubtedly, the larger part is wasted in the production of oil. Pumping the oil leaves the wells more or less open, and prevents any careful saving of the gas.

"Directly associated with the waste of natural gas by allowing it to escape freely from oil and gas wells, is the form of waste where the gas is used by delivering it through pipes back into the ground in oil wells below the oil-bearing stratum, so that it will spray the oil to the surface. The mixture of oil and gas then runs into a tank where the oil is saved, but usually the gas is allowed free vent to the outside air. The lack of care in saving the gas after thus using it, is a good sample of the carelessness with this material, prevalent in the oil fields.

"Where natural gas is utilised for power, heat, and the lighting of dwellings, and has once entered the pipe lines of the distributor, the waste is comparatively small, and little can be said at the present time in regard to any serious loss due to ineffective consumption. Much is used for lighting with incandescent mantles, an efficient use which leaves practically nothing to be desired. A still greater quantity is burned in stoves or in grates, under conditions which are also efficient. For power purposes, there is little excuse for burning gas under boilers for the generation of steam, when so much greater economy can readily be produced by consuming it in internal combustion engines, and the adoption of the gas engine in the place of steam should proceed with far greater rapidity than at present. The following table, prepared by Dr. F. H. Oliphant, shews that nine-tenths of all the gas used can be saved by substituting internal combustion engines for the kind of steam in use in the oil regions.

Comparison of Fuel per Indicated Horse-Power per Hour for Different Types of Engines.

Type of Engine.	Cubic feet of Gas.
Large natural gas engine, highest type	9
Ordinary natural gas engine	13
Triple expansion condensing steam engine	16
Double expansion condensing steam engine	20
Single cylinder and cut-off steam engine	40
Ordinary high pressure, without cut-off, steam engine	80
Ordinary oil well pumping steam engine	130

"What has been said above concerning substitution of gas engines supplied with natural gas, instead of burning natural gas under steam boilers, is a matter of small moment compared with the prevention of escape of natural gas into the air. Our total consumption of natural gas in the United States in 1907 was 404,000,000,000 cubic feet per year, whereas the amount wasted—not burned at all—was estimated at practically the same amount. Thus only half of all the natural gas actually produced goes to any useful purpose. This waste should furnish light for half the urban population of the United States. Remedy for this by legislation has been extremely effective in Indiana, Ohio and Pennsylvania. As a result, the waste of natural gas in these States has practically ceased. Great precaution is now used for the suppression of every flambeau, or open gas light. They are only to be seen at the present time, occasionally in connection with the drilling of oil wells. These precautions in late years have not been due so much to legal restrictions, as to the efforts of the natural gas distributors to economise in every direction in the saving of natural gas. The laws of Pennsylvania, West Virginia, Ohio and Indiana call for the efficient capping of every natural gas well when not in use. This, however, does not prevent the escape of natural gas where it is an incident of oil production. In this field, a more practical plan must result by the co-operation of the natural gas and oil collecting companies, by which the oil producer may receive pay promptly for natural gas to be collected by the natural gas companies from his oil well. In West Virginia, the oil collecting companies and the natural gas collecting companies are usually simply branches of the same company, and this plan of collecting gas from the oil wells is already being carried into effect. The ingenuity and watchfulness of the natural gas companies has effected far greater saving in natural gas than was believed possible five years ago. The result is in evidence from the gain in production in Pennsylvania and West Virginia, where high pressures have practically ceased.

"It is of prime necessity that the laws concerning the capping of natural gas wells, which have had such good effect in the principal oil and gas producing States, should be extended to the newer fields in the Southern and South-western States, and that the most radical measures should be taken to promptly suppress the great waste in these fields at the present time. When effective laws are in operation controlling the escape of gas from high-pressure wells, the problem will be reduced to saving the gas from the oil wells—a problem which can be solved only by affording a prompt and efficient market for the gas, even when produced in small quantity. Meantime, the problem of compressing natural gas into steel cylinders for small scale transportation is receiving much consideration. Within the next few years success will undoubtedly be attained in returning the natural gas to reservoirs within the earth, which have proved to be sufficiently tight to hold the gas under heavy pressure. Experiments in this direction, costing more than one-quarter of a million dollars, are being carried out in Ohio.

"Unlike petroleum, natural gas can be replaced efficiently, at least for all practical purposes, by fuel gases produced by methods already well understood, and which are being studied with great care by the Technologic Branch of the United States Geological Survey. This substitute of fuel gas is well understood. The replacement of the artificial gas for the natural will regularly follow trade relation of price. It is known that many large culm banks and other amounts of refuse coal are already owned by the natural gas companies in anticipation of their utilisation at the place where they occur for making and distributing gas to distant points of consumption. This long distance transportation of natural gas has been so experimented with between West Virginia and Cleveland, Ohio, that the transmission of power for long distances by means of fuel gas is now being studied as a certain feature of future industrial progress."

DETAILS OF BAKU PRODUCTION DURING JANUARY, 1909.

The following are the details of the production of crude oil at the Baku oil fields during January, as published in the latest issue of the *Neftiannoie Dielo* (in poods):—

	Number of Wells in Exploitation.	Production (in poods). By Baling.	By Spouters.	Casual.	Total.	Average per Well per Day
Balakhany	742	4,948,737	—	2,815	4,951,552	264
Saboontchi	768	15,812,741	—	330,100	16,142,841	747
Ramany	209	6,468,105	—	11,792	6,479,897	1,056
Bebe-Aibat	236	8,338,513	291,802	32,000	8,662,315	1,223
Total in January, 1909	1,955	35,568,116	291,802	376,707	36,236,605	676
Total in December, 1908	1,977	38,545,166	226,427	358,500	39,125,093	667
Total in January, 1908	1,653	35,650,662	3,564,324	470,567	39,685,493	824

The production by spouters was obtained from Zoubaloff's well at Bebe-Aibat (73,000 poods) and from Nobel's well No. 25, on plot 27 (218,802 poods).

TRIAL TRIP OF THE SS. "CHIRA."

This vessel, which has been built by Messrs. Smith's Dock Co., Ltd., was taken for trial at sea last Wednesday week, when she attained a speed of nearly 9 knots on the measured mile.

The vessel is 90 feet long, 19 feet breadth, and 7 feet 9 inches moulded depth. She is constructed to carry a deadweight of 100 tons, having a specal tank for carrying oil in bulk. She is to the order of Messrs. Lane and Macandrew, on behalf of William Keswick, Esq., M.P., of Leadenhall Street, E.C., and was built under the supervision of Messrs. Flannery, Baggallay, and Johnson, of London, Liverpool, and Rotterdam, and is classed 100 A1 at Lloyd's. The engines are by the Shields Engineering Co., and the boiler is constructed by Messrs. Eltringham, of South Shields, and the vessel is fitted with electric light and towage appliances. She is also fitted for oil fuel and coal burning.

SS. "DANUBIAN."

This vessel, which has been built by Messrs. Swan, Hunter and Wigham Richardson, Ltd., of Wallsend-on-Tyne, to the order of Messrs, Lane and Macandrew, 26, Great St. Helens, London, for the carriage of petroleum in bulk was taken for trial at sea on the 2nd April and obtained a speed of 11·245 knots.

The "Danubian," which has been supervised during construction by Messrs. Flannery, Baggallay and Johnson, is of the following dimensions:—399 feet 6 inches overall by 51 feet 6 inches by 30 feet 3 inches, and is to carry 7,100 tons of deadweight, and is built to the highest class at Lloyds, and also to fulfil the Suez Canal regulations for petroleum ships. The machinery is of the triple expansion type by the Wallsend Slipway and Engineering Co., Ltd., and has cylinders 27 inches by 45 inches by 74 inches by 48-inch stroke, taking steam from three large single-ended boilers at a working pressure of 180 lbs. A very complete installation of cargo pumping gear has been fitted, and the vessel is supplied with steam heating and electric light throughout for quick and efficient handling of the vessel.

SS. "MINA BREA."

This vessel, which has been built by Messrs. The Greenock and Grangemouth Dockyard Co., Ltd., at their Greenock yard, was taken on a loaded trial trip on Friday, 2nd April, and obtained a speed of 11½ knots with oil fuel. The vessel was ordered by Messrs. Lane and Macandrew, on behalf of William Keswick, Esq., M.P., of Leadenhall Street, London, E.C., and built under the supervision of Messrs. Flannery, Baggallay and Johnson, of London, Liverpool and Rotterdam. She has been constructed for the petroleum trade, especially with a view to carrying various kinds of oil in one cargo, and has been built to the highest class at Lloyd's and also to conform with the Suez Canal regulations for carriage of petroleum in bulk. Her dimensions are 373 feet long, 49 feet beam, and 29 feet moulded depth. The engines have been supplied by Messrs. John G. Kincaid and Co., Ltd., of Greenock, and have cylinders 25½ inches, 42 inches and 69 inches diameter, with a stroke of 48 inches, and three large boilers and donkey boiler, all fitted to burn oil or coal.

PRODUCTION OF ENGLISH COMPANIES IN RUSSIA.

Baku Russian Petroleum Co., Ltd.—The production for the week ended 27th March was 204,400 poods, or 3,295 tons; and for the week ended 3rd April was 202,300 poods, or 3,261 tons.

Russian Petroleum and Liquid Fuel Co., Ltd.—The production for the week ended 27th March was 200,000 poods, or 3,224 tons; and for the week ended 3rd April was 190,000 poods, or 3,063 tons.

Spies Petroleum Co., Ltd.—The production for the week ended 28th March was 241,630 poods, or 3,898 tons. The total production for year to 28th March was 2,725,670 poods, or about 43,952 tons. The total production for the corresponding period last year was 2,822,255 poods, or 45,520 tons. The output for the week ended 4th April was 215,670 poods, or 3,478 tons. The total production for year to 4th April was 2,941,340 poods, or about 47,441 tons. The total production for the corresponding period last year was 3,122,055 poods, or about 50,355 tons.

The European Petroleum Co., Ltd.—The production for the week ended 28th March was 137,027 poods, or 2,209 tons; and for the week ended 4th April was 149,917 poods, or 2,417 tons.

HAND-DUG WELLS IN THE BAKU DISTRICT.

Most interesting information is now published of a quite new method of exploiting the petroleum deposits in Baku. Baku spouters generally bring up an enormous quantity of sand, which is naturally saturated with crude oil, and as this sand has accumulated for a great many years, it has occurred to some enterprising people, owing to the high price of crude oil, to extract that oil contained in the sand. The total area on which this sand is deposited is about 700 acres, and this land has been divided into 130 plots, exploited by 167 people. The number of hand-dug wells in 1907 was 1,270. Most of these wells have a diameter of 4½ feet and a depth of from 42 to 56 feet. The average quantity of oil received from such wells was from 2 to 5 poods per day, but some of the wells have produced even 50 poods per day. At the commencement of 1908 there were in exploitation in the Binigadi district 28 wells, whilst 20 were in the course of boring, and five had been abandoned, making a total of 53.

The bored wells generally range from a depth of 140 to 210 feet, and very seldom has the production exceeded 70 poods per day, but on an average it is from 20 to 40 poods. According to the calculations of the Government officials, about 2,000,000 poods of oil are received per annum from hand-dug wells.

AMERICAN EXPORTS FOR FEBRUARY.

OFFICIAL STATISTICS.

According to the official publication of the Washington Bureau of Statistics, the exports of petroleum from America from the various ports during February were as under:—

	1908. Quantities. Gallons.	1909. Quantities. Gallons.
Crude—		
Baltimore	—	—
Boston and Charlestown	—	—
New York	—	1,642,917
Philadelphia	7,947,658	1,131,689
Galveston and Sabine	1,205,153	2,014,431
San Francisco	300	—
Totals	9,153,111	4,789,037
Total value for the month, 1908		$529,298
,, ,, ,, 1909		$237,003
Naphthas—		
Baltimore	400	2,730
Boston and Charlestown	—	—
New York	822,434	396,888
Philadelphia	843,088	1,000
Galveston and Sabine	—	6,000
San Francisco	1,040	2,365
Totals	1,666,962	408,983
Total value for the month, 1908		$225,011
,, ,, ,, 1909		$63,089
Illuminating—		
Baltimore	—	1,767,577
Boston and Charlestown	6,900	52,408
New York	46,516,956	37,569,452
Philadelphia	27,597,745	21,555,722
Galveston and Sabine	1,629,936	3,580,642
San Francisco	5,378,506	4 572,827
Totals	81,130,043	69,098,628
Total value for the month, 1908		$5,192,623
,, ,, ,, 1909		$4,628,413
Lubricating—		
Baltimore	391,250	447,650
Boston and Charlestown	14,256	24,966
New York	9,504,647	6,223,763
Philadelphia	2,215,973	3,689,775
Galveston and Sabine	25,438	3,532
San Francisco	23,928	23,274
Totals	12,175,492	10,412,960
Total value for the month, 1908		$1,621,370
,, ,, ,, 1909		$1,286,160
Residuum—		
Baltimore	—	—
Boston and Charlestown	—	33,169
New York	—	15,100
Philadelphia	618,750	804,340
Galveston and Sabine	3,054,339	2,751,691
San Francisco	2,600,700	—
Totals	6,273,789	3,604,300
Total value for the month, 1908		$231,749
,, ,, ,, 1909		$118,966
Total Mineral Oils—		
Baltimore	391,650	2,217,957
Boston and Charlestown	21,156	110,543
New York	57,462,787	45,848,120
Philadelphia	41,658,803	27,182,526
Galveston and Sabine	5,461,227	8,356,296
San Francisco	5,403,174	4,598,466
Totals	110,399,397	88,313,908
Total value for the month, 1908		$7,800,051
,, ,, ,, 1909		$6,333,631

◆

A Modified Viscometer.—Prof. A. Lidoff, of the University, Charkoff, has recently modified Engler's apparatus for testing the viscosity of oils, so as to enable a temperature higher than 100° C. to be tested For this purpose he suggests that Engler's viscometer should be hermetically closed, the air could be exhausted, and then to cover the apparatus with leather, or still better, rubber. By exhausting the air in the course of experiments, Prof. Lidoff has been able to maintain a constant temperature for a period of 15 to 20 minutes, which is naturally an important achievement.

ENGLISH PATENTS.

(Specially contributed by Messrs. EDWARD EVANS & Co., Consulting Engineers, Chartered Patent Agents, and Enrolled Patent Attorneys, of the United States, of 27, Chancery Lane, London, W.C

Applications Published in Great Britain.

Tanks for Holding, Measuring and Delivering Liquids.—John Heissenberger. No. 7799 of 1908.

This relates to oil tanks of the type having a measuring vessel for measuring and delivering automatically a determined amount of oil or other liquid, and consists in providing a measuring receptacle having a number of valved compartments constructed to contain different amounts of oil, which is adapted through a system of arms and levers to be raised and lowered inside the tank, whereby the receptacle may be first filled, then raised to its discharging position and then lowered again unto the oil for refilling. This also consists in providing a spout into which the receptacle discharges, which spout is capable of swinging back in the tank so as to be out of the way, and to be automatically brought into its discharging position by the receptable itself. This also consists in the provison of valves for controlling the discharge of the air from the measuring receptacle.

Improvements in and relating to Wick Adjusting Devices for Petroleum Lamps and the like.—Robert Emil Schreiber. No. 18438 of 1909.

This relates to wick adjusting devices for petroleum lamps and the like, and comprises a setting arm and a stop, one rotatable and the other normally non-rotatable relatively to the wick operating shaft, the said arm being actuated by a weight or spring, so that when uncoupled from the shaft, it will be brought into verticle position or against a second stop, whereby the extent of movement of the wick operating shaft after the arm is again coupled with the same, and the feeding movement of the wick will be automatically determined. A clutch may be used for coupling the setting arm with the wick operating shaft, one member of which clutch is formed as a disc serving as a turning button for said shaft.

Incandescent Petroleum Lamps.—Mathieu Melhul. No. 3087 of 1908.

This relates to incandescent petroleum lamps operating by gravitation, and provided with a vaporiser rising above the level of the petroleum in the reservoir, and comprises a feed reservoir and a supply pipe, through which the petroleum flows by gravitation from the reservoir into the vaporiser. The vaporiser rises in a loop above the petroleum, and is curved downwards so as to end below a partition closing in a globe in a nozzle. A glass globe is hermetically fitted to the top of the partition and is tightly connected with the draught pipe, a mixing chamber being fitted to the bottom of the partition. The mixing chamber connects by a wick with the inside of the glass globe, and is provided at its upper end with a metallic network over which is fitted an incandescent mantle.

Treatment of Hydrocarbon Oils or the like for the Production of Volatile Spirit.—James Noad and Edward Joseph Townsend. No. 13675 of 1908.

This relates to a process of converting hydrocarbon oils into volatile spirit and is characterised by introducing the oil, to be converted into liquid form, and water in liquid form in contiguous relation into a common chamber, from which air is excluded and which is packed with scrap iron, or is otherwise adapted to present a considerable area of iron in interstitial passages, and is maintained highly heated by a furnace, so that such liquids are vapourised and decomposed in the presence of each other, and of the highly heated iron, which acts as a catalytic agent, and the vapours are caused to pass through the said interstitial passages. The resultant vapours are condensed, and the condensed products on the light portions thereof are rectified to separate the volatile spirit.

TEMPORARY ADDRESS.

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THE PROPERTIES OF JAPANESE PETROLEUM.

The article here published was written by Mr. K. Kobayashi, a prominent oil chemist now associated with the Hoden Oil Co., of Echigo, Japan, with the assistance of Mr. H. N. Cooper, of Berkley, Cal., Prof. T. Takamatsu, Prof. Y. Kawakita, Mr. M. Tsuzimoto, Chemist at the Japanese Government experimental station, Mr. Kondo, Superintendent of the Nauboku Oil Co., and Mr. T. Tashiro, of the Hoden Oil Co. It appeared in the last issue of the "California Derrick," and we congratulate our contemporary upon the publication of so interesting and authentic an article upon Japanese petroleum and its properties.

(Concluded from page 202.)

I have redistilled the residuum, which does not contain any fraction under 150° C., and obtained nine fractions. This residuum also contains a small quantity of vaseline and paraffin, as do the Kitano oils and the Hara oils. Moreover, by further comparison, I have arrived at the conclusion that the Ojiya petroleum has similar properties to the Kitano oils, although its specific gravity, etc., differ widely from the latter. The Ojiya petroleum will be a good material as a source of benzine but there are very few refineries for this purpose. The boiling point of definite fractions of all Japanese petroleum does not correspond to that of Pennsylvania petroleum with corresponding density. In other words, Pennsylvania petroleum has a low density and a high boiling point, compared to the parallel products of Japanese petroleum. These considerations should not be neglected when refining the various grades of petroleum benzine from the Ojiya petroleum.

The Formosa petroleum is of amber colour, not transparent at 14° C. Its specific gravity is 0·8368 at 15·5° C., flashing point being 58° F. The results of fractional distillation are as follows, each fraction being one-tenth of the crude oil by volume:—

Number of Fractions.	Specific Gravity.
First product	0·7583
Second product	0·7784
Third product	0·7884
Fourth product	0·7943
Fifth product	0·8153
Sixth product	0·8250
Seventh product	0·8434
Eighth product	0·8653
Ninth product	—

By fractional distillation, referring to the boiling point, the following results are obtained:—

Fractions. Deg. C.	Per Cent.	Specific Gravity.
Under 100	0·6	0·7469
100-125	11·0	0·7730
125-150	14·2	0·7935
150-175	12·3	0·8079
175-200	15·6	0·8212
200-225	8·0	0·8421
225-250	18·6	0·8532
250-275	14·0	0·8601

Yield of light oil, kerosene, and heavy oil is as follows: —

	Per cent.
Light oil	25·8
Kerosene	68·5
Heavy oil	5·7

This heavy oil is of a yellowish brown colour, and has the consistency of butter. This heavy oil contains vaseline and paraffin as Kitano petroleum.

The relations between boiling point and specific gravity of distillate are as follows:—

Fractions. Deg. C.	Specific Gravity.
125-150	0·7977
150-175	0·8038
175-200	0·8226
200-225	0·8474
225-250	0·8664
250-275	0·8760

Considering these results, the Formosa petroleum resembles the Kitano, Hara, and Ojiya petroleum. Unfortunately the sample of this crude oil was not sufficient, so could not examine or make a further investigation.

The properties of the above-mentioned crude petroleum are shewn by the following table.

I cannot say much about the nature of Japanese crude petroleum, because I have not yet finished the determination of percentage of C and H. For combustion analysis, it is most important to collect the same parallel products by fractional distillation under diminished pressure.

Considering the relation between boiling point and specific gravity of the Nishiyama distillate above mentioned, it is a fact that all Japanese petroleums resemble the Russian petroleum, and not the Pennsylvania petroleums. Moreover, I have compared the specific gravity of each parallel product of Japanese, American, and Russian petroleum. Each fraction distilling from 195° C. to 205° C. was obtained after four times being carefully repeated fractional distillations of each crude petroleum. Each specific gravity of the fraction after purification with concentrated sulphuric acid was compared, and the results were as follows:—

American burning oil	0·7766
Russian burning oil	0·8089
Japanese crude oil, "Higashiyama"	0·8142
Japanese crude oil, "Nishiyama"	0·8178
Japanese crude oil, "Kubiki"	0·8145
Japanese crude oil, "Niitsu"	0·8200
Japanese crude oil, "Oyiya"	0·8199

Also it will be seen that there are some differences in composition between the crude oil from the northern Echizo and the Southern Echizo. Probably all Japanese petroleum consists of napthene hydrocarbon, but some of them contain other hydrocarbons richer in carbon. I conclude from my investigations that there are two types of crude oil:—

1. Nishiyama crude (Northern Echizo): Nishiyama, Higashiyama, and Niitsu oil fields.
2. Kubiki crude (Southern Echizo): Kitano, Hara, Ojiya, and Formosa oil fields.

At present I am trying to collect parallel fractions for combustion analysis and determination of their molecular weight, etc., with a view to decide these questions for certainty. I intend to discuss the subject at some future date.

THE MEXICAN PETROLEUM INDUSTRY.

THREATENED OVER-PRODUCTION.

The enormous oil production that is in sight in the several different fields that are being developed in Mexico, particularly in the Tampico territory, is already causing serious thought to be given to the question of what shall be done with the output. This problem does not, says a special correspondent of the *Oil, Paint and Drug Reporter* at Tampico, affect the concerns which have great aggregations of capital with which to build refineries, pipe lines and other facilities for carrying on a general utilisation and distribution of the product so much as it does the smaller operators who are limited in their financial resources and marketing facilities. It is admitted on all sides in Mexico that this country cannot begin to consume all of the oil that the different fields will soon be producing. In fact, it is stated by oil men who are in close touch with the situation that if all the wells which have already been bored and are now capped were to be turned loose the output of oil would be far in excess of the market demands of all Mexico at this time. And yet the oil development in this country has only just begun. Unless a foreign market is established for the product the industry in this country cannot assume the great proportions that is warranted by the native supply, it is claimed.

It is in order that a foreign market may be opened for the crude oil of Mexico that the producers in this country, practically all of whom are Englishmen or Americans, are agitating a removal of the countervailing duty on that product in both Mexico and the United States. Mexico has nothing to lose by a removal of the tariff on crude oils, or on refined oils for that matter, it is claimed, and little real harm would result to the material welfare of the oil interests in the United States from the Mexican competition which would result from putting oil on the free list. The statement is made here that many of the larger independent oil producers of the United States, particularly of the Texas and Oklahoma fields, have entered the Mexico fields and that it would be helping Americans more than anybody else for the United States market to be thrown open to them. In proof of this statement it is cited that the Texas company which is controlled by Mr. John W. Gates, and is one of the largest independent oil producers and refiners in the Texas and Oklahoma fields, has acquired extensive oil land holdings in Mexico which it is developing. The J. M. Guffey Petroleum Co., another big independent oil producer and refiner, has also entered the Mexico territory. Many of the independent oil producers of Kansas, Oklahoma, Texas, California, Pennsylvania and Illinois-Indiana fields have obtained leases upon thousands of acres of oil land in the Tampico territory and are preparing to develop their holdings on an enormous scale.

The Mexican Petroleum Co., which is said to have the largest developed oil property in Mexico at this time, although many of its wells are capped, is another American concern. In fact, it may well be said that Americans are already practically in position to control the oil industry of Mexico at this time, although the British firm of Messrs. S. Pearson and Son, Ltd., is doing the bulk of the actual business in the producing, refining and sale of the native product just now.

The activity of Americans in purchasing and leasing oil lands in the eastern coast territory, bordering on the Gulf of Mexico, extending all the way from the Rio Grande on the north to the Guatemala line almost, on the far south-eastern part of the country, is something remarkable. In some localities they are in large numbers. This is specially true of the Dos Bocas locality where the phenomenal oil geyser was brought in several months ago and has since then been transformed into a broad lake of boiling water and oil.

Well drilling outfits are being unloaded at stations along the lines of the Mexican Central every day and are transported to the localities that are being developed. Experienced workmen are coming in from the United States on every train and this American invasion is to be witnessed on every hand. The Mexicans are taking little active interest in the preparations that are going on around them for this wonderful oil development beyond looking after the sale or lease of their lands. Very few of them are interested in actual oil production.

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The American Oil Market.

New York, Week ended Mar. 27th.

The turn of the season has stimulated operations in many of the petroleum fields of the country, and there is a promise that with the advance of spring and the facilitation of transportation to and from the scene of operations much keener incentive will be imparted to development work after the check incident to winter conditions. Despite the increased number of completions recorded during the week, the total of new productions does not merit especially favourable consideration, and were it not for the extraordinary returns credited to Illinois, the week's results on the whole would suffer as compared with those of the previous period. The fields of West Virginia, Pennsylvania, and South-eastern Ohio present the least encouraging showing for the current week, thirty of the ninety-two completions falling in the duster column, and the new production aggregating 1,160 barrels per day, against 2,262 barrels from seventy-eight successful wells, as formerly noted South-eastern Ohio results were especially disappointing. Wildcatting has been more of a feature in this section than in any other part of the high-grade fields, particularly in Columbiana, Jefferson, Perry, and Fairfield counties, but so far there seems to have been little to justify these ventures from the established lines. The shallow sand development of Columbiana county has been especially attractive to the more venturesome operators, says the *Oil, Paint and Drug Reporter*, but of the eight completions reported in this county during the week seven were failures. Equally discouraging results marked the efforts to establish an extension to the Osage pool of Jefferson county in the same section. The most favourable showing of the week in the South-eastern Ohio section is the promise of a century or better producer in the Woodsfield district of Monroe county. Advices from Illinois indicate increasing activity throughout the State. Operations extended over 16 counties, but in 12 of them the work was of a wildcat nature, and as not a single successful completion is recorded in any but the defined districts, experimental drilling has sustained a decided discouragement. In Crawford and Lawrence counties, the mainstay of the State's production, results were of a much more favourable character, the daily average total reaching 5,337 barrels from 65 successful wells, against 3,510 barrels from 43 wells, as the former record. The principal operating companies are extending their pipe line facilities in the State, and a more commensurate outlet for crude from the wells is promised within a few months. Our Mid-Continent correspondent writes of the steadily increasing demand for crude from that field, although the production keeps about 55,000 barrels a day in excess of requirements. Much interest is occasioned in extending pipe line facilities to Gulf coast ports. Two grades of Kentucky crude have been reduced during the week, Somerset from $1 to 90 cents and Ragland from 65 cents to 60 cents, the decline being attributed to the excess of supplies. This is the first change to be posted in any grade of crude east of the Mississippi river since last July. Wildcatting continues a feature of field work in Kentucky. The most favourable showing from these ventures was in the Cumberland river section of Knox county, where a test was credited with pumping 60 barrels per day. In the Gulf coast section the new development at Sour Lake, Texas, attracts keenest interest, the wells coming in with an encouraging degree of regularity, although none of them seems to be of unusual capacity.

REFINED AND PRODUCTS.—A further decrease in the export movement in refined has marked the course of the week in the local market. Our record of clearances for the interval shews a total of 7,683,150 gallons, of which 2,800,000 gallons were shipped in bulk, against 11,145,440 gallons during the former week. The aggregate in refined for export so far this year again falls below that of the corresponding period last year. Engagements for forward shipping have comprised 150,000 cases for Japan, Philadelphia loading. The volume of domestic trading for the week has been reported of steady, seasonable proportions. A steadily increasing trade has been experienced in the products for gas engine consumption, and values remain on a well-established basis for all varieties. Clearances of naphtha for the week totalled 267,870 gallons, against 379,470 gallons for the former period.

CLOSING QUOTATIONS.

CRUDE AT THE WELLS.

The quotations for oil represented by credit balances were :—

	Week ended Mar. 27. 1908.	Week ended Mar. 27. 1909.
Pennsylvania	$1·78	$1·78
Tiona	1·78	1·78
North Lima	1·04	1·04
South Lima	0·99	0·99
Indiana	0·99	0·99
Illinois, heavy, below 30 deg. ..	0·60	0·60
Kansas and Indian Ter., 32 deg. and above	0·41	0·41
Heavy	0·28	0·28
Humble, Tex.	0·70	0 53
Saratoga	0·71	0·53
Sour Lake, Tex.	0·70	0·53
Jennings, La.	0·70	0·54
Santa Maria	—	1 00
Coalinga	—	0·60
CANADIAN OIL :—		
Petrolia	1·34	1·44
Oil Springs, less pipeage	1·41	1·51

REFINED—FOR EXPORT.

In cents.	Week ended Mar. 27. S.W. 110 test.	Week ended Mar. 27. W.W. 150 test.
Barrels, cargo .. .. per gal.	8·50	@10·00
Philadelphia	8·45	@ 9·95
Bulk, New York	5·00	@ 6·50
Bulk, Philadelphia	4·95	@ 6·45
Cases, New York	10·90	@12·40
Cases Philadelphia	10 85	@12·35

REFINED IN CASES—110 FIRE TEST.

	Week ended Mar. 20. 1909.	Week ended Mar. 27. 1909
3,000 to 10,000	11·05	11·05
1,000 to 3,000	11·10	11·10

REFINED—JOBBING LOTS.

In barrels, pkgs. included.

	Week ended Mar. 20.	Week ended Mar. 27.
130 fire test, S.W.	11¾	11¾
150 fire test, W.W.	12¼	12¼
In bulk from tanks	9	9
300 fire test	13¼@13¾	13@13¾

NAPHTHA AND GASOLENE.

	Week ended Mar. 20	Week ended Mar. 27.
Naphtha, V. M. and P. deod. ..	11¾	11¾
Gasolene, 86 deg.	22¾	22¾

PENNSYLVANIAN OIL RUNS from Mar. 18th to Mar. 24th were :—Mar. 18th, 91,355; Mar. 19th and 20th, 226,060*; Mar. 21st, 191,470*; Mar. 22nd, 121,366*; Mar. 23rd, 308,906*; and Mar. 24th, 202,469*.

* Includes Illinois Oil.

THE DELIVERIES OF PENNSYLVANIAN OIL from Mar. 19th to Mar. 25th were:—Mar. 19th, 202,964; Mar. 20th and 21st, 332,365*; Mar. 22nd, 256,301; Mar. 23rd, 225,177*; Mar. 24th, 198,586; and Mar. 25th, 187,562*.

* Includes Illinois Oil.

CLEARANCES FOR THE WEEK.

During the week ended Mar. 26th and since Jan. 1, the clearances of petroleum, in gallons, from the port of New York, were as follows:—

	Week.	Year.	1908.
Refined	7,683,150	130,228,070	137,677,910
Crude	—	6,774,915	3,373,625
Naphtha	267,870	6,284,120	1,446,420
Residuum ..	—	108,070	573,900

EXPORT STATISTICS.

The total exports from the port of New York and from the United States have been :—

	Gallons.
From New York, week ended Mar. 26th ..	10,244,200
Total from New York, from Jan. 1st, 1909 ..	180,413,342
Same period last year	186,884,172
Decrease	6,470,830
From United States, week ended Mar. 26th	13,640,400
Total from United States, since Jan. 1st, 1909	303,572,629
Same period last year	352,410,660
Decrease	48,838,031

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The "Review" Shipping List.

April 9, 1909.

(*The following abbreviations are used in this table*:—L. Left; P. Passed; Arr. Arrived; Sp. Spoken; Tr. Trading.)
Anglo-American Co.'s vessels marked thus (□): the Anglo-Saxon Co.'s tankers thus (*): and Messrs. Lane and Macandrew's thus (†).

Vessel.	From.	For.	Latest Date and Position.
ALCHYMIST	London	Smyrna	L. Malta, Mar. 21
ALICE ET ISABELLE (Fr. bq.)	—	—	In Port Rouen, Feb. 24
AMERICAN	Batoum & Zoungoulak	Antwerp	P. Dungeness, April 1
APPALACHEE □	Kustendje	—	P. Perim, Mar. 28/9
APSCHERON	Batoum	Thameshaven	P. Constant'ple, Mar. 26
ARAL	Algiers	Shields	Arr. Feb. 25
ARAS	Amsterdam	Blyth	Arr. Mar. 6
ASHTABULA □	San Pedro	Shanghai	L. Mar. 20
ASTRAKHAN	Shields	Philadelphia	Arr. abt. Mar. 25
AUGUSTA	London	Philadelphia	L. Portland (I), Mar. 10
AUGUST KORFF	Liverpool	Philadelphia	Arr. abt. Mar. 25
AUREOLE	Amsterdam	New Orleans	At Norfolk (Va.), Mar. 28
BAKU STANDARD	Batoum	Cardiff	Arr. Jan. 24
BALAKANI†	Port Arthur	Sunderland	Arr. April 4
BATOUM	Thameshaven	Tyne	Arr Mar. 26
BAYONNE	Naples	Philadelphia	Arr. abt. Mar. 30
BEACON LIGHT	La Pallice	Penarth	L. Mar. 30
BLOOMFIELD	Emden	Galveston	Arr. Mar. 28
BORJOM	Alexandria	Batoum	L. Constant'ple, Mar. 24
BRILLIANT	New York	Swinemunde	L. Mar. 22
BROADMAYNE	Vallo	Shields	Arr. Feb. 13
BULLMOUTH*	Calcutta	Rangoon	L. Mar. 24
BULYSSES*	Saitozaki	Karatzu	L. Mar. 28
BURGERMEISTER PETERSEN	Tyne	Philadelphia	L. Mar. 22
BUYO MARU	Yokohama	Uraga	L. Feb. 14
CADILLAC	Dublin	New York	L. Mar. 30
CALCUTTA (B. b.) □	Tsingtan	San Francisco	Arr. abt. Mar. 23
CAPTAIN A. F. LUCAS (with S.O. Barge 95)	—	Havana	Arr. prev. Mar. 23
CARDIUM*	Batoum	Cochin	Arr. Mar.
CARPATHIAN†	Tyne	Port Arthur	L. Mar. 20
CAUCASIAN†	Tyne	Port Arthur	L. Mar. 12
CHARLOIS	Philadelphia	Antwerp	P. Prawle Pt., Mar. 30
CHESAPEAKE □	Sabang	Natal	Arr. abt. Mar. 30
CHESTER	Antwerp	Kustendje	P. Ushant, Mar. 21
CHEYENNE	Tyne	New York	Arr. Mar. 26
CITY OF EVERETT (with S.O. Barge 94)	—	—	In Port, N. York, Mar. 3
CIUDAD DE REUS	New York	Palma	L. Mar. 6
CLAM*	Singapore	Saitozaki	L. Mar. 12
CLEMATIS	Antwerp & Tyne	Fernandina	P. Prawle Pt., Mar. 15
COALTAR (s.)	Selzaete	Groningen	L. Mar. 23
COL. E. L. DRAKE	—	—	Coasting U.S. and Pacific
CONCH	Tyne	Constant'ple	L. Malta, Mar. 26
COWRIE*	Singapore	Kobe	L. Mar. 20
CUYAHOGA □	Rotterdam	Tyne	Arr. Mar. 31
CYMBELINE	Port Arthur	Portland	L Mar. 19
CZAR NICOLAI II.	Copenhagen	New York	P. Dover, April 3
DAGHESTAN	Tyne	Batoum	L. Mar. 30
DAKOTAH □	Shanghai	San Francisco	Put back Shanghai, abt. Mar. 20
DANUBIAN	Tyne	Port Arthur	P. Dunnet Head, April 5
DELAWARE □	Philadelphia	Liverpool	Arr. April 1
DERBENT	Antwerp	Philadelphia	P. Lizard, Mar. 22
DEUTSCHLAND	—	—	In Port, Hamburg, Mar. 16
DIAMANT	Tyne	New York	Arr. Mar. 29
EDWARD DAWSON	Port Arthur	Liverpool	Arr. Mar. 29
ELAX*	Balekpappan	Woosung	L Mar. 27
ELISE MARIE	Hamburg	—	At Shields, April 3
EL LOBO	Campana	Payta	Arr. Mar. 8
ENERGIE	Pillau & Tyne	Philadelphia	P. Butt of Lewis, Mar. 19
ERIVAN	Manchester	Batoum	L. Mar. 30
ETELKA	Rouen	Batoum	L. Mar. 25
EUPLECTELA*	Kustendje	Soesoe	Arr. Mar. 25
EXCELSIOR	Rotterdam	Philadelphia	P. Scilly, April 1
FRANCE MARIE (French bq.)	Cette	New York	P. Tarifa, Mar. 16
GEESTEMUNDE	Rouen & Tyne	New York	Arr. Mar. 29
GENESSE □	Sunderland	New Orleans	P. Dover, Mar. 29
GEORGIAN PRINCE	Rouen	Tyne	L. Mar. 29
GOLDMOUTH*	Batoum	Singapore	L. Colombo, Mar. 25
GUTHEIL	New York	Havana	L. Mar. 26
HAINAUT (Du. sh.)	Antwerp	New York	P. Zeebrugge, Mar. 27
HARRY WADSWORTH	Hull	New Orleans	Arr. Mar. 23
HELIOS	Tyne	Philadephia	At New York, Mar. 14 (dmgd.)
HERMIONE	Rotterdam	Cardiff	Arr. Mar. 22
HESPERUS	Rotterdam	New York	L. Mar. 30
HOTHAM NEWTON	Batoum	Folly House Buoys	At Gravesend, April 3
HYRCANIA	Batoum	London	P. Gibraltar, April 4/5
IOANNIS COUTZIS	Cardiff	Piræus	Arr. Mar. 3
IROQUOIS □ (towing barge Navahoe)	London	New York	P. Scilly, Mar. 30
J. B. AUG. KESSLER	New York	Kurrachee & Bombay	L. Mar. 12
JAMES BRAND	Tyne	Baltimore	L. Mar. 19
JOYO MARU	Port Arthur	Avonmouth	Arr. Mar. 12
JULES HENRI (French bq.)	Philadelphia & Cette	Marseilles	Arr. Mar. 26
KURA	New York	Belfast	Arr. Mar. 28
LA CAMPINE	Antwerp	Philadelphia	P. Scilly, Mar. 16
LA FLANDRE	Ghent	—	Sd. Shields, April 2
LA HESBAYE	Antwerp	Batoum	P. Beachy Head, Mar. 27
LACKAWANNA □	Bombay	Aroe Bay	Arr. Mar. 25
LANSING	Pt. San Luis	San Francisco	L. Mar. 1
LE COQ†	Havre	Novorossisk	P. Ushant, April 4
LOUTSCH	Calais	—	At Shields, April 2
LUCERNA	Bordeaux	Novorossisk	L. Mar. 29
LUCIGEN	Trial Trip	Shields	Arr. Mar. 6
LUCILINE†	New York	Dunkirk	L. April 5
LUMEN	New York	Oporto	Put back Lisbon, Mar. 26
LUTETIAN†	Rouen	Novorossisk	P. Gibraltar, Mar. 30
LUX†	Novorossisk	Rouen	Arr. April 4
MAKKAVEI	Odessa	Novorossisk	L. Mar. 8
MANHATTAN	Venice	Kustendje	Arr. Mar. 27
MANNHEIM	Amsterdam	Philadelphia	Arr. abt. Mar. 20
MARGARETHA	Hull	Kustendje	L. April 3
METEOR	Batoum	Vladivostock	At Singapore, abt Mar. 24
MEXICAN PRINCE	Stettin	Stockton	Arr. in Port, Mar. 15
MINA BREA	—	—	Lnchd. Greenock, Mar. 10
MINHLA	Tyne	Rangoon	P. Isle of Wight, Mar. 29
MIRA	—	—	In Port Blyth, laid up
MUREX*	Honololu	Yokohama	Arr. abt. Mar. 24
NARRAGANSETT	London & Tyne	New York	P. Dunnet Head, Mar. 29
NEW YORK □	Rotterdam	Tyne	P. Scilly, Mar. 29
NIAGARA	San Francisco	Taku	Arr. Mar. 28
OBERON	Manchester	Port Arthur	P. Eastham, Mar. 26
OCEAN	Philadelphia	Rotterdam	P. Dover, Mar. 31
OILFIELD	Tyne	Port Arthur	P. Prawle Pt., Mar. 26

Vessel.	From.	For.	Latest Date and Position.
OKLAHOMA	New York	Port Arthur	L. Mar. 21
ORIFLAMME†	Tyne	New York	P. Dover, Mar. 27
OTTAWA □	Philadelphia	Avonmouth	Arr. April 5
OURAL	Rouen	Batoum	L. Mar. 24
PATELLA	—	—	Lnchd. Wallsend, Mar. 11
PAUL PAIX	Penarth	New York	Arr. Mar 22
PAULA	Tyne	Philadelphia	Arr. abt. Mar. 31
PECTAN*	Sabine Pass	London	L Mar. 21
PENNOIL	Tyne	Philadelphia	Arr. abt. Mar. 28
PETROLEINE	Philadelphia	Cette	Arr. Mar. 22
PETROLEUM	Portsmouth	Texas	L. Mar. 25
PHOEBUS	New York	Hamburg	P. Dover, Mar. 29
PINNA†	Payta	Yokohama	Arr. April 5
POTOMAC □	Liverpool	New York	P. Nantucket, Mar. 31
PROGRESSO ARGENTINA (Ar. bq.)	Port Arthur	Campana	Sp. Feb. 5 off Fowey Rks., Flda.
PROMETHEUS	Rotterdam	New York	L. Mar. 21
PRUDENTIA	Hull	Port Arthur	P. Lizard, Mar. 14
PURELIGHT	Philadelphia	Hamburg	Arr. Mar. 27
QUEVILLY (Fr. bq.)	Rouen	New York	L. Feb. 11
RENDOVA (Br. bq.)	Seville	New York	L. Mar. 22
RION	Philadelphia	Avonmouth	L. Mar. 27
ROCK LIGHT†	Newport News	London	L. April 5
ROMANY*	Freshwater	Shanghai	L. Mar. 27
ROTTERDAM	Amsterdam	New York	P. Prawle Pt., Mar. 29
ROUMANIAN†	Newp't News	Hamburg	L. Mar. 25
RUSSIAN PRINCE	Cienfuegos	London or Liverpool	L. Mar. 26
SALAHADJI	—	Singapore	Arr Mar. 7
SAN CRISTOBAL	Port Arthur	Liverpool	In Port, Mar. 24
SAN IGNACIO DE LOYOLA (Sp. bq.)	Pasages	New York	Arr. Mar. 22
SANTA MARIA	Port San Luis	Taltal	Arr. Feb. 18
SANTA RITA	San Francisco	Honolulu	Arr. Mar. 10
SARANAC □	London	Tyne	Arr. Mar. 23
SAXOLEINE	Bordeaux	Philadelphia	L. Dartmouth, Mar. 27
SCHUYLKILL	Cebu	Manila	Arr. Mar. 15
SEMINOLE □	Hong Kong	San Francisco	Arr. Mar. 15
SERVIAN†	Newport Nws	Manchester	L. Mar. 27
SNOWFLAKE	Cuba	Flushing	L. Mar. 25
SOYO MARU	Peru	Yokohama	L. Honolulu, Mar. 6
SPONDILUS*	Samboe	Rotterdam	P. St. Catherine Pt., April 3
STANDARD	New York	Bremerhaven	L. Mar. 24
STROMBUS*	—	Freshwater	Arr. Mar. 24
SULTAN VAN LANGKAT	Freshwater	Melbourne	Arr. abt. Mar. 30
SUN	Sabine	Marcus Hook	L. Mar. 20
SUNLIGHT (Br. bq.)	Port Arthur	Foynes	L. Mar. 10
SURAM	Philadelphia	Hamburg	P. Beachy Head, April 3
SUWANEE □	Hull	Philadelphia	Arr. abt. Mar. 29
SVIET	Rouen	Batoum	L. Plymouth, April 3
TAMARC □	London	Philadelphia	Signalled Browhead, April 3
TELENA*	Philadelphia	Madras & Calcutta	P. Gibraltar, Mar. 29
TEREK†	Philadelphia	Venice	P. Gibraltar, April 5
TEXAS	Philadelphia	Christiana	P. Butt of Lewis, April 4
TIFLIS	Port Arthur	Rouen	L. Newport News, Mar. 29
TIOGA □	Grangemouth	Perth Amboy	P. Dunnet Head, Mar. 29
TONAWANDA □	—	Hiogo	Arr. abt. Mar. 31
TRINCULO	Port Arthur	Cardiff	L. Portland (D), Mar. 30
TROCAS	Singapore	Balekpappan	Arr. Mar. 23
TUSCARORA	Calcutta	Singapore	L. Mar. 10
VEDRA	Balekpappan	Channel	L. Singapore, Mar. 16
VILLE DE DIEPPE (Nor. bq.)	Rouen	Philadelphia	L. Feb. 27
VOLUTE	Freshwater	Shanghai	L. Mar. 15
WASHINGTON	Kurrachee	Bombay	L. Mar. 23
WASHTENAW	San Francisco	Portland (O.)	L. Mar. 1
WEEHAWKEN	Kustendje	England	L. Mar. 22
WILLKOMMEN	New York	Rotterdam	L. Mar. 28
WINNEBAGO	Moji	San Francisco	L. Mar. 11

Latest Market Intelligence.

LONDON OIL MARKET.

Supplied by Messrs. Benjamin & Gee, 31, St. Mary Axe, E.C.

April 7th, 1909.

The price of Refined Petroleum is unaltered as follows:—Russian, 6¼d.; American, 6⅞d.; Water White, 7⅞d.; Roumanian, 7d.

LUBRICATING OILS

There are no changes to report, quotations remaining:—

American pale, £6 10s. to £10 10s.
American dark cylinder, from £8.
American filtered cylinder, from £11 5s.
No. 1 Russian, for Spot, £8 7s. 6d.

TURPENTINE.

American Turpentine has been down to 25/6, but is now slightly higher at 25/9 for Spot; May/June 26/-; and July/December, 27/-.

LIVERPOOL OIL MARKET.

April 7th.

Refined oils are quiet, and sellers quote 6¾d., for Russian, Galician or Roumanian; and 7¼d. to 8¼d. per gallon for American.

Petroleum Spirit continues at 1s. 0d. to 1s. 1½d. per gallon for American deodorised, according to quality on the spot.

LATEST AMERICAN PRICES.

New York, April 7th.

Refined, in cases, is steady at 10·90; Standard White, 8·50; Credit balances, 1·78c.

Philadelphia, April 7th.

Standard White is now quoted at 8·45.

RUSSIA.

Baku, April 4th.

The Baku oil market is firm. Crude oil, spot, 22 copecs per pood. Residuals, 22⅛ copecs. Kerosene, in ships, 31 copecs.

BELGIUM.

Antwerp, April 4th.

The petroleum market is firm. Price of Standard White, spot, 22 francs per 100 kilos.

FRANCE.

Paris, April 2nd.

Illuminating oil is quoted in bulk, in whole tank waggons, 23·50 francs per hectolitre; spirit, 33·75 francs per hectolitre. Special white oil, in barrels or cans, 31·50 francs per hectolitre.

GERMANY.

Hamburg, April 2nd.

The kerosene market is firm. The price of American Standard White is 7·35 marks per 50 kilos.; Roumanian and Galician, 7·15 marks.

HOLLAND.

Amsterdam, April 2nd.

The petroleum market remains firm. American Standard White, spot, 12·20 florins per 100 kilos.

ROUMANIA.

April 2nd.

	Francs.
Crude oil from different fields, including pipe line charges, per 100 kgs.	4·50–4·70
Refined oil, exclusive of taxes, ex. refinery	8·70
Residuals in tank waggons, at refinery	4·35
Paraffin	130·00
Prices for Export.	
Refined oil, f.o.b., per 100 kgs.	7·25–7·75
Benzine, sp. gr. 0·710–0·715, f.o.b.	18·00
„ sp. gr. 0·715–0·720 „	15·50
„ sp. gr. 0·730–0·740 „	11·00
„ sp. gr. 0·745–0.755 „	10·00

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IMPORTS of PETROLEUM into UNITED KINGDOM

Specially prepared foı this Journal by the Custom House.

FOR THE WEEK ENDED 29TH MARCH, 1909—

Date.	Port and Importers.	Description.	No. of Gals.	Port Whence.
Mar.	London—			
23	London & India Docks Co.	Lub.	500	Hamburg
24	J. Spurling	,,	80	Antwerp
24	J. W. Baker	,,	7,210	Philadel.
25	W. H. J. Alexander	,,	2,870	,,
25	B. Jacob and Sons, Ltd.	,,	2,000	Hamburg
25	Page, Son and East	Lub. Gr.	30	Antwerp
25	T. H. Lee	Lub.	250	Hamburg
25	,,	,,	250	,,
26	H. Finckler and Co.	Resid.	10,120	Trieste
27	Page, Son and East	Lub Gr.	80	Antwerp
27	Bowring Petroleum Co.	Lub.	8,580	Philadel.
27	Lub. and Fuel Oils Co.	,,	5,490	,,
29	Thompson, McKay & Co.	,,	40	,,
29	A. Brown and Co.	,,	10,800	,,
29	,,	Lamp	1,200	,,
29	Thames Tug & Lighterage Co.	Lub.	7,200	,,
29	Mordaunt Bros.	,,	5,000	,,
29	J. W. Baker	,,	7,200	,,
29	Produce Brokers' Co.	,,	7,200	,,
29	Mordaunt Bros.	,,	2,500	New York
29	Lunham and Moore	,,	200	,,
29	A. H. Post	,,	80	,,
29	Scott's Wharf	,,	5,400	,,
29	Anglo-American Oil Co. (Tamarac)	Gas	1,352,860	Philadel.
29	,, ,,	Fuel	229,430	,,
29	Thames Tug & Lighterage Co.	Lub.	80	Copenhagen
29	T. H. Lee	Lub. Oil and Gr.	120	Hamburg
29	Page, Son and East	Lub. Oil and Gr.	640	Antwerp
29	R. Park and Co.	Lub.	240	Marseilles
	Liverpool—			
23	C. C. Wakefield	Lub. Gr	300	Antwerp
23	American Express Co.	Lub. Oil and Gr.	280	New York
23	Ismay, Imrie and Co.	Lub.	1,400	,,
23	Meade-King, Robinson & Co. (Erivan)	,,	295,850	Batoum
23	,, ,,	Resid.	119,750	,,
23	,, ,,	Crude	80	,,
24	Bancroft and Co.	Lub.	250	Antwerp
24	W. Gibson and Sons	Lamp	3,080	Boston
25	Geo. B. Taylor	Lub.	69,780	New York
25	Valvoline Oil Co.	,,	13,940	,,
25	Vacuum Oil Co.	,,	36,400	,,
25	Liverpool Storage Co.	Lub. Gr.	15,400	Philadel.
25	,,	Lub.	19,000	,,
25	Midland Railway Co.	,,	2,060	,,
25	C. C. Wakefield and Co.	,,	610	Genoa
25	Pickford's, Ltd.	Lub. Oil and Paste	740	Hamburg
26	American Line	Lub.	2,440	Philadel.
26	Crew, Levick and Co.	Lub. Gr.	260	,,
26	Crew, Levick and Co.	Lub.	28,890	Philadel.
26	,,	M. Colza	5,200	,,
26	,,	Resid.	4,840	,,
26	W. B. Dick and Co.	Lub.	24,460	,,
26	G. B. Taylor	,,	17,600	,,
26	Bowring Petroleum Co.	,,	7,260	,,
26	Meade-King, Robinson & Co.	,,	41,000	,,
26	Worthington and Boler	Lub.Gr.	200	,,
26	,,	Lub.	800	,,
26	Bramwell, Fern and Co.	,,	5,840	,,
26	W. H. Nott and Co.	Lub. Gr.	260	New York
29	J. Light and Son	Lub.	2,000	Philadel.
29	J. T. Fletcher and Co.	,,	220	Antwerp
29	Vacuum Oil Co.	Lub.Gr.	140	,,
29	Meade-King, Robinson & Co.	Lub.	1,600	Hamburg
29	,, ,,	,,	1,200	Batoum
	Bristol—			
23	J. and R. Bush	,,	19,240	New York
23	,,	Lamp	10,000	,,
23	H. R. James and Sons	Lub.	2,000	,,
23	,,	,,	5,260	,,
25	Pickford's	Lub. Oil and Paste	1,110	Hamburg
25	E. Stock and Sons	Lub. Gr.	120	,,
25	Anglo-Bosphorus Oil Co.	Lub	3,750	New York
27	J. and R. Bush	,,	49,200	,,
27	,,	,,	2,400	,,
27	H. R. James and Son	Resid.	10,880	,,
27	,,	Lub.	10,400	,,
27	,,	M.Colza	28,560	,,
29	,,	Lub.	6,040	,,
	Goole—			
23	Goole Steamship Co.	,,	240	Hamburg
	Grimsby—			
23	J. Sutcliffe and Son	,,	2,000	,,
23	,,	,,	80	Antwerp
26	,,	,,	250	Hamburg
	Hartlepool—			
26	W. Hartlep'l Steam Nav. Co.	,,	1,440	,,
	Harwich—			
24	D. Howard	,,	180	Antwerp
24	,,	,,	40	,,
24	,,	,,	20	,,
27	,,	,,	560	,,
27	,,	,,	80	,,
27	,,	,,	280	,,
	Hull—			
25	Wilsons and N.E. Co.	,,	720	Hamburg
26	,,	,,	160	Antwerp
26	,,	,,	1,200	,,
26	Homelight Oil Co. (Margaretha)	Lamp	749,090	Batoum
29	T. Wilson, Sons and Co.	Lub.	136,890	New York

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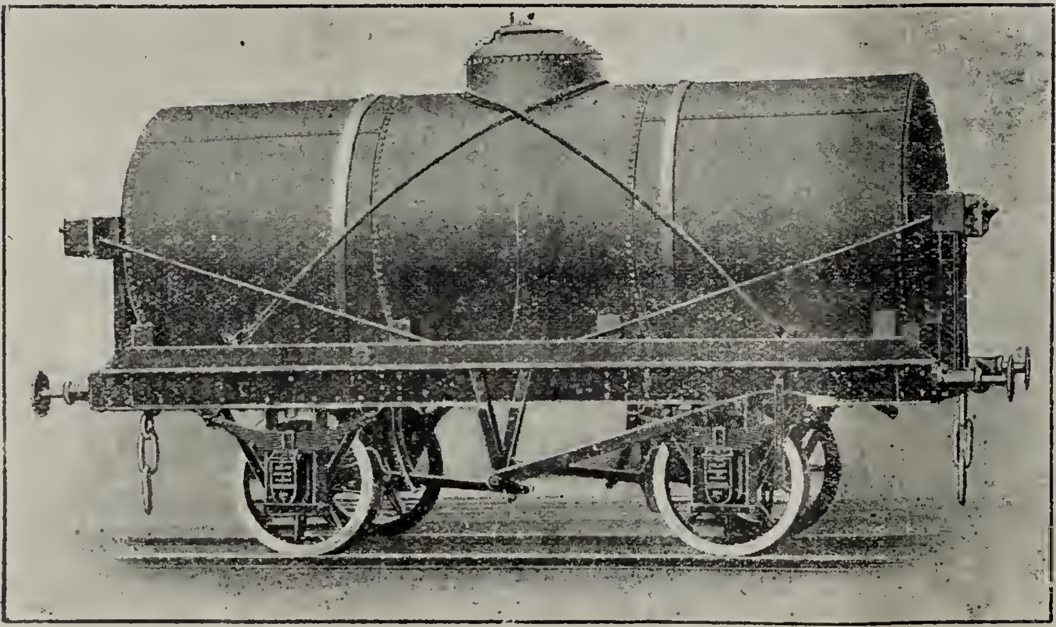

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IMPORTS.—(*Concluded*).

Date.	Port and Importer.	Description.	No. of Galls.	Port Whence.
Mar.	Manchester—			
23	Meade-King, Robinson & Co.	M.Colza	3,000	New York
23	Bramwell, Fern and Co.	Lamp	3,650	Philadel.
23	,,	Lub.	56,370	,,
24	Crew, Levick and Co.	,,	10,830	Philadel.
24	Meade-King, Robinson & Co.	,,	52,160	,,
24	,,	Lamp	8,160	,,
24	G. B. Taylor	Lub.	94,560	,,
24	J. T. Fletcher and Co.	,,	480	Antwerp
24	C. H. Morton and Sons	,,	2,640	Philadel.
24	George B. Taylor	,,	127,640	,,
25	Meade-King, Robinson & Co. (Erivan)	,,	177,120	Batoum
25	,,	,,	3,400	,,
25	Bramwell, Fern and Co. (Erivan)	,,	177,120	,,
25	,,	,,	3,400	,,
25	Meade-King, Robinson & Co.	Crude	80	,,
	Middlesbro'—			
25	E. Harris and Co.	Lub.Gr.	60	Antwerp
	Newcastle—			
23	Tyne-Tees Steamship Co.	Lub.	240	Hamburg
23	,,	,,	2,640	Antwerp
26	,,	,,	240	Hamburg
29	,,	,,	2,660	,,
	Plymouth—			
23	J. Nicholson and Co.	,,	130	Hamburg
	Newport—			
25	Mordey, Jones and Co.	Lub. Gr.	140	Antwerp
27	Jones, Heard and Co.	Lub.	9,000	New York
27	,,	M.Colza	3,000	,,
	Glasgow—			
23	Anchor Line	Lub.	46,940	,,
23	Clyde Shipping Co.	,,	450	Antwerp
	Grangemouth—			
23	W. Graham-Yooll and Co.	Lamp	5,200	Hamburg
29	J. Currie and Co.	Lub.	2,000	,,
	Leith—			
23	G. Gibson and Co.	,,	280	Antwerp
23	Henderson and McIntosh	,,	38,000	Philadel.
25	W. Graham Yooll and Co.	Lamp	3,450	Hamburg
29	Geo. Gibson and Co.	Lub.	170	Antwerp
	Lerwick—			
27	Olna Whaling Co.	Lamp	800	Tonsberg
	Belfast—			
26	British Petroleum Co.(Kura)	Gas	821,000	New York
			5,089,990	
	Deduct to Correct—			
	London—			
15/2	Fellows, Morton & Clayton	Lub.	5,210	Philadel.
	Manchester—			
2/3	Hy. Wells Oil Co.	,,	28,170	,,
	Liverpool—			
15/2	Meade-King, Robinson & Co.	Gas	20,260	Pt. Arthur
	Total for the Week		5,036,340	

FOR THE FIVE DAYS ENDED 3RD APRIL, 1909—

Date.	Port and Importers.	Lescription.	No. of Galls.	Port Whence.
Mar.	London—			
30	Drolenvaux and Povemner	Lub.	240	Hamburg
30	British and Foreign Wharf	,,	1,090	Antwerp
30	W. H. J. Alexander	,,	2,670	New York
30	London and India Docks Co.	,,	5,600	,,
30	Anglo-American Oil Co.	,,	1,000	,,
30	Lunham and Moore	,,	80	,,
31	London and India Docks Co.	,,	400	,,
31	G. and H. Green	L.Comp.	1,080	,,
31	Anglo-American Oil Co.	Lub.	62,240	,,
31	Mercantile Lighterage Co.	,,	10,680	,,
31	Fielder, Hickman and Co.	,,	5,520	,,
31	Anglo-American Oil Co.	,,	59,000	Philadel.
April.				
1	Page, Son and East	Lub. Oil and Gr.	280	Antwerp
1	P. W. Hughes	Lub.	2,400	Philadel.
1	H. P. Wheatley and Co. (Hotham Newton)	,,	810,000	Batoum
1	Port of London Authority	,,	4,000	Hamburg
1	T. H. Lee	,,	170	,,
1	W. H. J. Alexander	,,	2,670	Philadel.
2	Mordaunt Bros.	,,	2,100	,,
2	A. Brown and Co.	Lamp	4,000	,,
2	M. Record	Lub.	4,000	,,
2	British and Foreign Wharf	,,	700	Antwerp
April				
3	T. H. Lee	Lub.Gr.	260	Hamburg
3	Bowring Petroleum Co.	Lub.	2,330	Philadel.
3	A. Brown and Co.	,,	3,640	,,
3	Schlieman's Oil Works	,,	2,700	Hamburg
	Bristol—			
1	Anglo-Bosphorus Oil Co.	,,	1,000	,,
1	E. Stock and Sons	,,	2,000	,,
1	W. G. Clarke	,,	70	Antwerp
3	H. R. James and Sons	,,	25,000	New York
3	,,	M.Colza	6,960	,,
Mar.	Liverpool—			
30	Crew, Levick and Co.	,,	4,340	Philadel.
30	Meade-King, Robinson & Co. (Edward Dawson)	Gas	570,400	Pt. Arthur
30	,,	Lub.	20,960	Baltimore
31	W. B. Dick and Co.	,,	10,450	,,
April				
1	Ismay, Imrie and Co.	,,	240	New York
1	Burnaby and Chantrell	L.Comp.	1,020	New York
2	Meade-King, Robinson & Co.	Lub.	3,000	,,
2	Liverpool Storage Co.	,,	400	,,
2	American Express Co.	,,	70	,,
2	Vacuum Oil Co,	,,	18,040	,,
3	G. B. Taylor	,,	60,000	,,
15/3	(A.R.) Anglo-Amer. Oil Co. (Genesee)	Gas	31,840	Sabine
Mar.	Grimsby—			
30	J. Sutcliffe and Son	Lub.	1,520	Antwerp
April	Goole—			
1	Goole S.S. Co.	,,	1,030	Hamburg
2	,,	,,	110	,,
	West Hartlepool—			
2	W. Hartlepool S.N. Co.	,,	400	,,
Mar.	Harwich—			
30	D. Howard	,,	300	Antwerp
April	Hull—			
1	W. Gilyott and Co.	,,	68,440	New York
1	Wilsons and N.E. Co.	,,	1,040	Hamburg
1	,,	,,	1,400	Antwerp
3	T. Wilson, Sons and Co.	,,	86,600	New York
Mar.	Manchester—			
31	J. T. Fletcher and Co.	,,	80	Antwerp
April				
1	D. Currie and Co.	,,	120	Hamburg
2	Meade-King, Robinson & Co.	M.Colza	6,000	New York
2	Lamport and Holt	Lub.	840	,,
3	Anglo-American Oil Co. (Delaware)	Lamp	1,285,450	Philadel.
Mar.	Newcastle—			
30	Tyne-Tees S.S. Co.	L.Paste	100	Hamburg
April				
1	,,	Lamp	2,000	,,
3	,,	Lub.	560	Antwerp
Mar.	Swansea—			
30	Burgess and Co.	L.Paste	110	Hamburg
	Glasgow—			
30	Clyde Shipping Co.	Lub.	120	Antwerp
30	Anchor Line	,,	35,430	New York
	Leith—			
30	Henderson and McIntosh	,,	37,000	Philadel.
April				
1	W. Graham-Yooll and Co.	Lamp	3,580	Hamburg
1	J. Currie and Co.	Lub.	400	,,
1	G. Gibson and Co.	,,	80	Antwerp
			3,277,350	
	Deduct to correct—			
	London—			
24/2	British Pet. Co. (Rion)	Lamp	80,800	Philadel.
	Liverpool—			
6/3	Anglo-American Oil Co. (Aug. Korff)	Lub	4,700	,,
15/3	,, (Potomac)	Lamp	10,150	New York
	Total for Week		3,181,700	
	Total for the Period		8,218,040	

◆

Countervailing Duties on Petroleum.—We announced in a recent issue that a suggestion was causing great trouble among American oil producers, which was to the effect that the countervailing duties upon petroleum were to be removed. General satisfaction will now be felt by the statement that the countervailing duties are to be retained by the new tariff bill which has been agreed to.

The Petroleum Review.

By PAUL DVORKOVITZ.

Vol. XX. *(New Series.)* April 24th, 1909. No. 449

THE PETROLEUM REVIEW:

The ANNUAL SUBSCRIPTION for both English and Foreign readers is 26s., including Postage. Single Copies may be had at the offices at 1s.

The Editor would esteem it a favour if readers, when communicating with the various firms advertising in our pages, would mention the "Review."

Contributions upon items of interest are always welcomed from subscribers, but in each case these should be accompanied with the name and address of the sender, not necessarily for publication.

Editorial Notes.

The Significant Discovery in Egypt. The announcement which we elsewhere make of the discovery of oil in commercial quantities in Egypt becomes at once of great interest and importance to all associated with the petroleum industry. For several years the petroleum operator has been no stranger to those territories bordering upon the Red Sea, and trial oil borings have been made long ago at several spots, but it has been left to an English concern—the Egyptian Oil Trust, Ltd.—to unearth that mineral wealth which is bound to play a most important part in Egypt's trade in the future. From a strategic point of view, the situation of the new Egyptian fields is very unique, and placed as they are immediately upon the banks of one of the chief waterways of the world, their importance is almost without a parallel. As a base for the supply of liquid fuel, these new territories will at once occupy a most prominent position, and the fact that they will be operared by an English concern is, in itself, sufficient evidence that interest in the developments will be continuously sustained. Needless to say, the Review will be kept well informed with all authentic information regarding these new fields.

The Attitude of the Roumanian Government to the Petroleum Industry. The Russian Minister of Trade and Industry, Mr. Timirazeff, in explaining to the Duma a few days ago the general programme which the Government has decided to carry out in order to develop the trade and industry of Russia, made an important statement respecting the petroleum industry which will doubtless be received with satisfaction by everyone. Mr. Timirazeff is of opinion that it is necessary to take every possible step to increase the production of petroleum by means of placing all the known petroleum lands not already exploited at the disposal of private enterprise. This refers to not only the lands to be developed in the Apscheron Peninsula, but also to the territories in Uchta, Kuban, Tersk, the Caspian Islands, Tuskestan, the Amur district and Sakhalien. Should no private enterprise be forthcoming to search for petroleum in the above-mentioned places, then the land will be exploited by the Government, who will also undertake the geological investigations. The Government is opposed to these petroliferous lands falling into a few strong hands, but prefers that a chance should be given to the smaller producers to participate in the further development of this valuable branch of Russia's mineral wealth.

The Petroleum-Bearing Areas in Spain. Consequent upon the registration of the Anglo-Spanish Oil Syndicate, we have reason to believe that a serious and systematic search will be made to place the exploitation of Spain's petroliferous areas upon a thoroughly commercial basis. To-day it may be taken that the consumption of petroleum and its products in Spain amounts to not far short of 500,000 tons per annum, and inasmuch as a heavy import tax is placed upon foreign produced and refined petroleum, it will at once be apparent that the scope for the establishment of a solid petroleum industry in the Spanish kingdom is almost limitless. For many years, the province of Cadiz has been known to be petroliferous, and several attempts have been made to sink productive wells, but owing to the great escape of gases, work has on several occasions been abandoned altogether, inasmuch as the workmen were overpowered, while it is placed on record that only last year when one trial boring reached a depth of 106 metres, the gas pressure was such as to blow the tools out of the borehole. Since that time operations have been continued with a view to reaching the petroleum-bearing stratum, and this was accomplished a few months ago. An analysis of the oil obtained is now being made, and we hope to announce the results of this at an early date.

March Operations in the American Fields. There was less activity in the eastern American oil-field operations during March than there has been for many months past, yet the results were fairly satisfactory, while toward the end of the month, a spirit of activity seemed to spread abroad, and considerable new work was commenced. On the other hand, in the territories west of the Mississippi the operations were substantially in advance of those for the previous month, and the combined new production for the Illinois and the Mid-Continent fields for the month was nearly 30,000 barrels. In the regions producing light grade oil, the average daily yield per well during March was 10½ barrels—an admittedly small figure, yet one above the low level of months past. In Texas, the production has fallen to a very low ebb, while even in California, no great gain in production was made during the month, but this latter state of affairs was consequent upon a decrease in activity, rather than to disappointing results of the drill.

◆

THE ROMANO-AMERICANA'S BALANCE SHEET.

The balance sheet of the Romano-Americana for the year 1908 shews a profit of 710,606 francs on the capital of 12,500,000 francs. The total income was 4,241,046 francs. The expenditure was:—General expenses 710,875 francs, abandoned wells and installations 1,180,485, for amortisation capital 1,598,094 francs and the 5 per cent. reserve 37,400 francs. The general meeting of shareholders will take place on May 18, 1909,

◆

LONDON OIL SHARE MARKET.

Friday, April 23rd, 1909.

Although business has been on a much smaller scale during the past fortnight (which includes the Easter vacation) the tone of the Oil Share Group is strong and promising for the future with a general improvement registered.

Tidings from Egypt have been very promising and the Shares in Egyptian Oil had a sharp advance to $2\frac{1}{16}$-$2\frac{3}{16}$ from $1\frac{1}{2}$-.$\frac{3}{4}$.

Shell Transport Ordinary and Preference have both been in request, the former improving 2s. 3d. at 56s. 6d. to 57s. 6d. and the latter $\frac{1}{8}$ at $10\frac{3}{4}$-11.

Commonwealth Oil Preference and Ordinary are $\frac{1}{16}$ higher at $1\frac{1}{16}$-$1\frac{3}{16}$, while Assam Oil and Spies are 3d. to the good at 16s. 3d. to 17s. 3d. and 11s. to 11s. 6d. respectively.

Californian Oilfields have not been quite such a good market, losing $\frac{1}{8}$ at $5\frac{1}{8}$-$5\frac{3}{8}$, and Lobitos Oil are 6d. easier at 26s. to 27s.

THE INDIAN PETROLEUM MARKET.

(Crowded out of page 257.)

Bombay, Mar. 29th.

The petroleum market is strong. The following are the current prices of the Standard Oil Co. of New York:

		Rs.	a.	p
Snowflake Brand, 150 deg., American	(per case)	6	4	2
White Rose, 150 deg. ,,	,,	6	4	2
Chester Brand, 76 deg. Abel	,,	4	12	2
Devoe's Brilliant	,,	4	12	2
Monkey Brand, 76 deg. Abel	,,	4	2	2
Elephant Brand, 125 deg. (bulk in tins)	(per 2 tins)	3	4	0
Elephant Brand, 125 deg (bulk without tins) (per 8 Imperial gallons)		2	4	0

The following are the current prices of the Asiatic Petroleum Co., Ltd.:—

		Rs.	a.	p.
Swan Brand, bulk loose..	(per unit)	1	11	0
Swan Brand, new tins	(per pair)	2	5	0
Ship Brand, bulk loose	(per unit)	2	0	0
Ship Brand, new tins	(per pair)	2	10	0
Rising Sun Brand, bulk loose	,,	2	2	0
Rising Sun Brand, new tins	,,	2	12	0
Anchor Cases	(per case)	4	2	0
Silver Light 150 deg. cases, ...	(per case)	5	4	0

The prices of the Burma Oil Co.'s productions are as under:—

		Rs.	a.	p.
Kerosene, Victoria	(per 2 tins)	3	8	0
Kerosene, Victoria	(per 8 gallons)	2	14	0
Kerosene, Chukker	(per 2 tins)	3	15	0
Kerosene, Chukker	(per 8 gallons)	3	5	0
Burmah Wax	(per pound)	0	4	0
Burmah Candles	,,	0	5	6

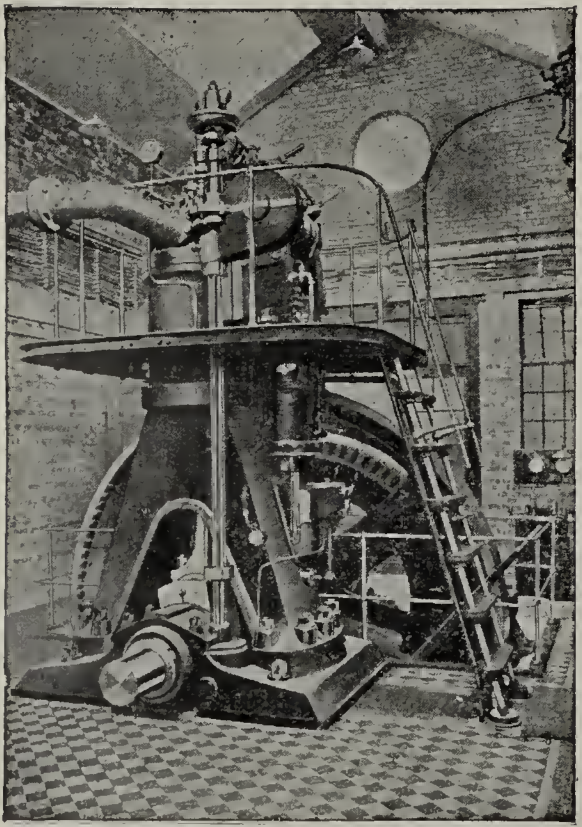
◆

SS. "MINA BREA."

This vessel having been taken for an oil burning trial at the beginning of the month, when, as already recorded in the Review, she obtained a speed of $11\frac{1}{2}$ knots, under loaded conditions, has just been taken for a trial under coal conditions, from Greenock to Cardiff, when she made a speed of 12 knots, the coal consumption being 1·57 lbs. per imperial horse-power.

◆

Export of Canadian Gas Discontinued.—The exportation of Canadian natural gas has been discontinued. Last year the only company exporting it was piped 250,000,000 cubic feet to Buffalo.



80 B.H.P. Diesel Engine coupled to Alternator.

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300,000 B.H.P. Sold.

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DIESEL ENGINE Co., Ltd.,

179, Queen Victoria St., LONDON, E.C.

IMPORTANT STRIKE OF OIL IN EGYPT.

Successful Operations of the Egyptian Oil Trust.

A most important strike of oil has recently been made by the Egyptian Oil Trust, Ltd., in one of its wells upon the coast of the Red Sea.

The company, which was formed in June, 1907, has a capital of £100,000, half of which amount was placed aside for working capital. The company's concessions embrace a territory covering 100 square miles, lying immediately west of the Red Sea at its most northern point, and run for miles along the waters of the Gulf of Suez.

On the Property of the Egyptian Oil Trust, Ltd.

The territory was surveyed by the company's consulting engineer and general manager—Mr. D. A. Sutherland—prior to the commencement of operations, and sites for several borings were mapped out. The necessary machinery was dispatched from England as quickly as possible, and, under the supervision of Mr. J. Josh, the company's manager on the spot, boring operations were commenced on January 1st last year. For a time drilling was confined to the well which has now been successfully brought in, and the first indications of oil were encountered at a depth of 137 feet, while from a depth of 400 feet to the depth at which the well was brought in—1,290 feet—strata saturated with oil were ever present. A three months' delay was caused owing to the losing of the tools. The water trouble was considerable, but this was overcome at a depth of 1,260 feet at which the casing was set, drilling being continued another 30 feet below this point.

The Successful Well, shewing its Close Proximity to the Sea—on the Right.

The actual bringing in of the well is best told by reproducing the cables which have been received at the offices of the Egyptian Oil Trust, Ltd., and which we are allowed to publish by the courtesy of the company's secretary—Mr. Carter.

The cables are as under :—

"Well No. 1, 1,290 feet—No change in strata. Well in good condition, perfectly free of water. Flowed once above top of derrick. Estimated present production, 10 tons per day. Drilling difficult. Continuous gas; several men overcome. Gate valve fixed; everything ready for big flow. No. 1 boiler working well, liquid fuel; fitting others for the same. No. 3, shallow well, 328 feet. Gypsum as before."

"Well No. 1—Since telegraphing supply increased to 50 tons a day estimated; free of water. Am forwarding you photographs of flow. Well closed. Writing fully. Await instructions. No. 3, shallow well, 370 feet; clay; show of oil."

The well is now capped and arrangements are being made for the erection of suitable reservoirs for the storage of the oil. As will be seen from the photographs here reproduced, the company is drilling two other wells, one of these being at present down to a depth of 370 feet, and here the indications are even more favourable than was the case in well No. 1. Upon well No. 3, boring has only practically started.

It is of interest to recall the fact that exploitation for oil has been carried on for several years in a somewhat haphazard manner in Egypt by numerous people. The recently successful boring has been sunk in the neighbourhood of old wells, these latter having failed to produce oil owing, in the opinion of Mr. D. A. Sutherland, to there being an absence of a proper water shut-off, combined with the fact that they were not drilled to a sufficient depth. Prior to boring being commenced upon their wells, the Egyptian Oil Trust took great trouble and pains to see that the old wells were properly cemented, minimising therefore as much as possible the water trouble.

The Latest Photograph of the Company's Wells.

The importance of the present discovery cannot be over-estimated, for the new field is upon the chief waterway of the world, and, therefore, from a naval point of view, is in a unique strategic position.

We hope in our next issue to publish a photograph taken after the well had been brought in.

PETROLEUM DEVELOPMENTS IN PERSIA.

FORMATION OF THE ANGLO-PERSIAN OIL COMPANY, LTD.

Interest has been aroused in the petroleum developments in Persia by the flotation of the Anglo-Persian Oil Co., Ltd., a concern capitalised at £2,600,000, which during the past few days has gone to public issue with 600,000 cumulative six per cent. participating shares of £1 each, and £600,000 first debenture stock.

The company has been formed, among other things, to acquire the D'Arcy concession for the exclusive privilege to search for and develop petroleum and other minerals throughout the Persian Empire (with a few exceptions), and its objects include the construction of pipe lines, the erection of refineries, the drilling and working of oil wells, etc.

Large portions of the area embraced in the concession were subjected to geological examination some years ago, and several wells were sunk, oil being struck (so the prospectus states) at moderate depths. In all, six wells were drilled, but work appears to have been seriously continued only in regard to four. The prospectus further points out that this four-well field is at a convenient place for commencing industrial operations, and the well sites have been so selected as to prove an oil deposit of about 1,000 acres, capable of accommodating some 200 wells.

It is a great pity the prospectus falls short just at a point where it might have been expected to go into considerable detail, for while no mention is made of the depths at which the oil was struck, or the quantities which the four wells produce, it is clear that the vendors, by the present issue are to be repaid something like £400,000 in cash, and £1,000,000 in ordinary shares for their expenditure upon the territory up to date. This sum suggests that the exploitation has in the past been exceedingly costly, and in the face of this, it seems beside the question altogether to point out that 200 wells can be accommodated upon one portion of the concession. One might also have been told the results which the crude oil shews by distillation, since much depends upon the quality.

The Review, however, thanks to the courtesy of the Consul-General at Bender-Bushire, is in a position to give a number of details which will be of great interest regarding the developments upon these concessions. The Consul-General reports as under:—

A few years ago the Company d'Arcy commenced exploring for petroleum in South Persia, but after some very costly and unsuccessful experiments gave the exploration over to the English Concession Syndicate, Ltd. This company has from the beginning been very fortunate, for it succeeded in discovering rich petroleum deposits about 40-50 versts from the town of Shuster.

The concession extends over five square versts, and derricks, earthern reservoirs, storehouses, and other buildings have now been erected as well as dwelling houses for the employés and workpeople.

In September last two boreholes were drilled. When the first reached a depth of 1,200 feet a spouter of enormous power was struck, and the volume of oil was so great that it was quite impossible to cap the well. The earthern reservoirs of a capacity of 170 cub. sagenes each were hastily constructed, into which the oil was directed. The second borehole reached a depth of 750 feet, when a spouter of less power broke out. A third borehole has now been drilled to a depth of 450 feet, and judging by the large volumes of gas, it promises to give a spouter of still greater power than the first one. According to the analysis of the oil, it is of great value, and is very similar to the Baku petroleum. It is very rich in illuminating oil, paraffin, vaseline and and other heavy oils.

The transport of the oil has not yet been regulated. There is a project now on foot for building a pipe line from the fields to Shat-el-Arab, near Mochamerri, where the oil will be pumped into tankers. A large quantity of cases has already been ordered in France and soon expected on the spot.

The direct consequence of the discovery of the Arabistan oil fields will undoubtedly be to entirely stop the import into the ports of the Persian Bay of Russian and American illuminating oils, and also create great competition for the latter on the Indian, East Turkish and Central Persian oil markets. Of Russian kerosene there were imported into Persian ports in 1905-1907 96,111 poods, value 147,504 roubles. The American import is twelve times as much. Thus the losses of the foreign imports from the competition of the Arabistan oil will be very great.

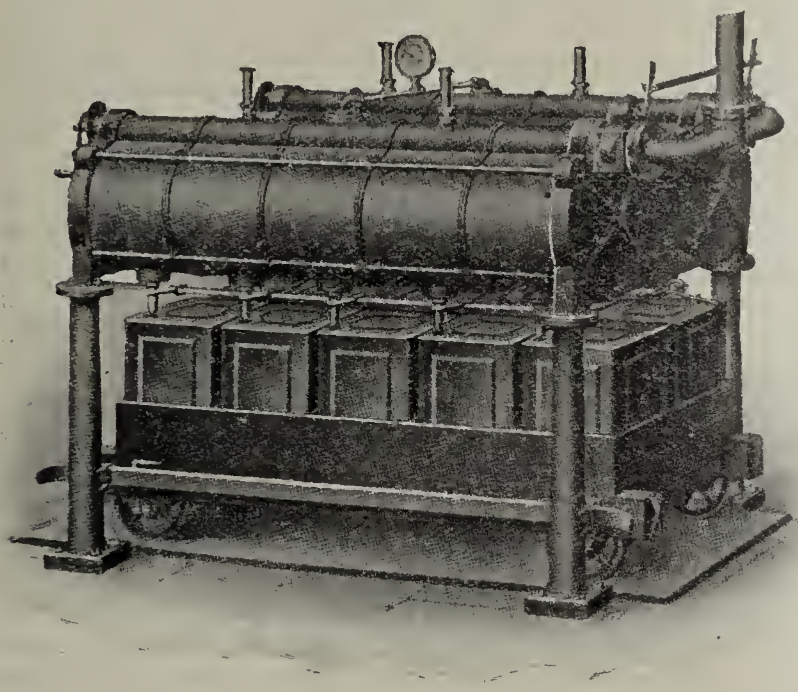
It will be seen that the Consul-General places great importance upon the recent developments, and while we have no desire to underestimate these, we repeat that it would have been far better had more details been given in the prospectus which has been so recently before the public. One thing which has particularly struck us in reading through the prospectus is that the vendors appear to have secured for themselves very remunerative terms with the company. Not only do they receive the cash back, spent upon the concession for several years past, but interest upon the outlay, while inasmuch as they will be in the majority by having such a large block of shares, the property will practically still be in their hands. Even this is not all, for the company has undertaken to discharge all the liabilities of the concessionnaire and the vendors.

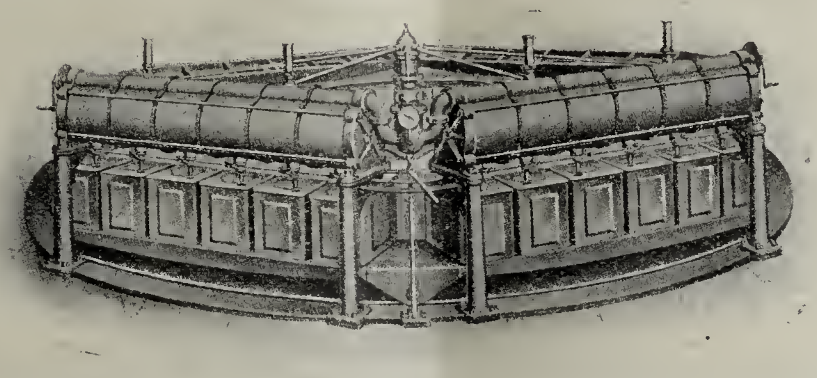
SHALL THE NEXT INTERNATIONAL PETROLEUM CONGRESS MEET IN AMERICA?

The question of the advisability of the next Petroleum Congress of 1910 meeting in America was discussed recently before a meeting of the members of the National Petroleum Association at Cambridge Springs, when the officers were instructed to secure such action on the part of the Federal Government as would bring the International Congress of 1910 to America. The meeting placed upon record a resolution stating that "in view of the fact that the Congress would have much to do respecting the standardisation of the tests for petroleum and its products, it was particularly desired by the Association that that should be done only after careful investigation of the physical conditions and characteristics of the various crude oils produced in America."

A New Automatic Petroleum Can-Filling Apparatus.

Mr. H. Simmons, of 72, Bishopsgate Street Within, London, E.C., who has made a study of measuring and filling machines for various liquids, has recently produced and patented a machine, which is particularly adapted for petroleum and petroleum products. A representative of the Review visited Mr. Simmons a few days ago, when the new automatic petrol filler was thoroughly explained to him by the patentee. The machine has several novel points, one of the most important of these being the compensating arrangement for varying the capacity of the measures to meet the increase and decrease in bulk of the liquid, due to rise or fall of temperature, or for dealing with liquids of different specific gravities. Therefore the same weight of liquid can be filled into the cans, although the gravity may considerably vary throughout the day.





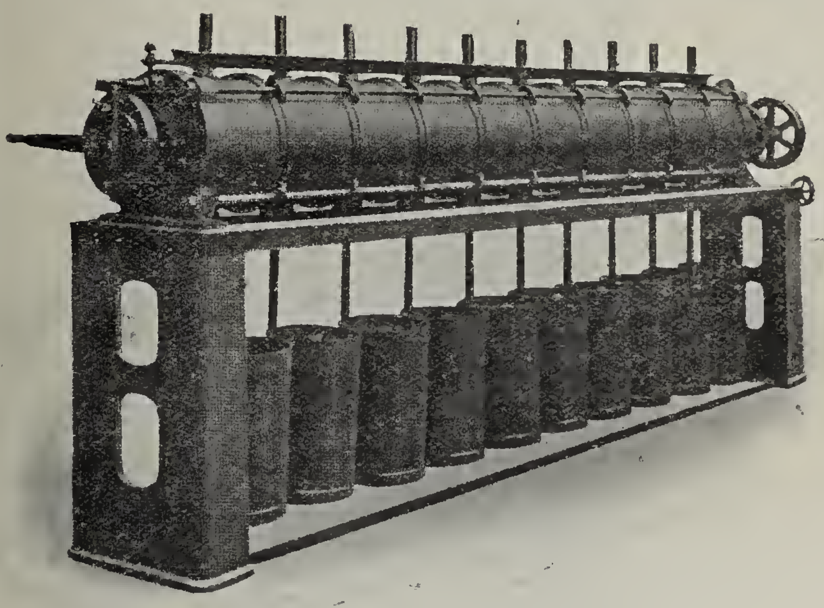
The New Rotary Can Filler.

The degree of accuracy attained is very high. For instance, in a machine operating ten 4-gallon tins, the variation in any one measure being only ·076 per cent., and in the range of ten measures only ·005 per cent., which is obtained by the system employed of closed measures, filled under pressure, the air being driven off through the air values fixed at the highest point of each measure. The valves close automatically the moment the measures are filled, an indicator on the pressure gauge principle close to the inlet valves, shewing by a red disc when the measures are full or empty.

As the filling is done under pressure and the measures cannot overflow, the measuring is very rapid and overflow pipe are entirely obviated.

The measures are in the form of hollow cylinders or rings accurately bored out and faced at the ends with circular partition plates between each, and end covers all held together with outside rods, so that any desired number of rings can be strung together. The feed pipe to the measures passes through the centre of all the measures, projecting through the end cover farthest from the inlet valves. The tube has ports for the flow of oil to each measure. The tube is free to revolve through half its circumference, by this means a varying quantity of oil can be delivered, the quantity being determined by the radial position of the ports. The tube is revolved by a disc with lever handle fixed to the projecting end of the tube; a suitable pointer is fixed to the end cover to indicate the required position, the periphery of the disc being marked to correspond with the various gravities of oil used, or with the degrees of the thermometer.

The outlet cocks with lever handles are all connected by a rod, the cocks are also of a novel construction, the shell and plug being fixed in a vertical position, the liquid passing out through the shank of the plug, which is hollow, delivering a solid stream without splashing. The string of measures, as will be seen from the illustration are mounted on standards for filling drums or cans over a fixed platform, or the measures are supplied complete with a revolving table. The tables are either square or hexagon, the tins being loaded on one side of the platform, the table turned round to bring the tins under the fillers, while from the other sides, the tins are being removed. With the hexagon table, two sides are loaded with empty tins, and both sides are filled simultaneously.



In another system illustrated above, the tins are packed into trucks, wheeled under the fillers, filled and passed on to the stores, thus saving one handling of the tins.

Mr. Simmons is now building machines for rapidly and accurately filling twenty petrol tins simultaneously, the system having already been approved by the Board of Trade.

THE EFFICIENCY AND ECONOMY OF LIQUID FUEL FOR MARINE PURPOSES.

The efficiency and economy of liquid fuel forms the subject of a brief article in a recent issue of *Engineering*. The writer points out that, so far, it cannot be said that liquid fuel has made much headway in the merchant service. It is true that the evaporative efficiency, weight for weight, is from 33 to 70 per cent. better than coal, according to the calorific value of the latter, and that the reduction in bunker capacity, and in weight of fuel carried, enables more cargo to be taken, or a smaller ship to be built for a given duty, or a higher speed to be realised for the load carried. In the case of the high-speed Cunarders, for instance, there might have been a possible reduction of between 2,000 and 3,000 tons in displacement, and this would have increased greatly the speed for the same power, or reduced the power for the same speed. But with oil in this country selling at 60s., as compared with anything from 10s. to 20s. per ton for coal, there is not much inducement to adopt the liquid-fuel system. Indeed, the great cost is carrying weight with economists, even at the Admiralty, notwithstanding the great strategical and tactical advantages of oil fuel already well known.

There are other gains, however, in the reduction of the cost of burning the fuel—in the loading, trimming, and stoking of fuel, in the smaller staff required, and in the repairs etc., bill. It has been difficult to get exact comparative data of the financial results of burning oil and coal, apart from the calorific results. In the accompanying table there are given such comparative figures from three merchant ships in service:—

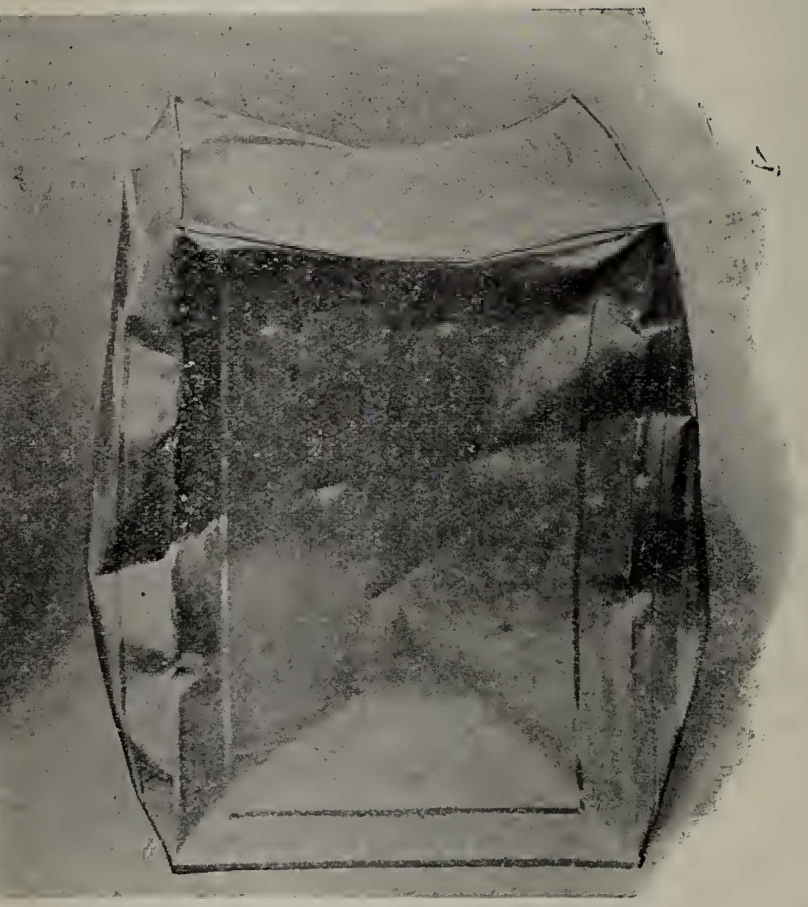
Comparison of the Labour Cost per Day of Burning Coal and Oil in Three Steamers.

Example.	Fuel.	Boiler Draught.	Tons of Fuel Used.	Number of Firemen	Wages of Stokehold Complement.			Victuall-Firemen, etc.			Repairs and Maintenance.			Total Cost.			Total Cost per Ton of Fuel.	
1.	2.	3.	4.	5.	6.			7.			8.			9.			10.	
					£.	s.	d.	£.	s.	d.	£.	s.	d.	£.	s.	d.	s.	d.
1	Coal	Natural	22½	11	1	9	4	0	11	0	0	5	5	2	5	9	2	0
	Oil	Do.	15	3	0	8	0	0	3	0	0	0	9	0	11	9	0	9½
2	Coal	Forced	29¼	14	1	17	4	0	14	0	0	10	1	3	1	5	2	1
	Oil	Do.	19½	3	0	8	0	0	3	0	0	1	0	0	12	0	0	7½
3	Coal	Forced	300	—	19	12	0	12	13	0	5	5	0	37	10	0	2	6
	Oil	Do.	200	12	2	0	0	0	18	0	0	7	6	5	5	6	0	4

There is given a comparison of the expenses in three different ships, the third a moderate sized corgo-carrier. Column 4 gives the consumption respectively in each ship for the same service, and it will be seen that the oil is about 33 per cent. less than the coal; in other words, two tons of oil give the same energy at the propeller as three tons of coal. The number of firemen (column 5) and the wages paid (column 6) in the smaller steamers when using oil fuel is less than one-fourth what they are when using coal; but with increased size of ship and greater power of machinery the gain is augmented. Thus the owner of the cargo steamer using oil pays in wages only one-fifth of the sum disbursed when burning coal. Oil does not need to be trimmed nor conveyed by men from distant bunkers. For very small cost in steam pumping power it is automatically fed into the boiler, which is not the case with coal. The relative repair and maintenance costs given in column 8 are most significant: liquid fuel is a preservative of steel; as the boiler doors are never opened, as with coal-burning, there are no such sudden variations in temperature as those which affect junctions of tubes with tube-plates, and involve other troubles with coal-fired boilers. The net result is that oil in a steamer using 200 tons per day cost 4d. per ton to burn, against 2s 6d. for coal. This does not include the first cost of the fuel or plant for separating water from the oil, heating, compressing, and air-spraying the oil.

CAN-MAKING PLANT.

American "Hemmed-edge" Can, showing how easily the end can be forced off.



"Rhodes" "Double-seamed" Can, after being heavily hammered the ends are just as firmly attached.

DOUBLE SEAMED CANS, as made by "Rhodes" Patent Machinery, are produced at **same or less cost** in every respect as the "Hemmed-edge" Can.

Sole Makers— **J. RHODES & SONS, Ltd.,** Grove Iron Works, WAKEFIELD, ENG.

MISCELLANEA.

PETROLEUM IN UCHTA OFFICIALLY DECLARED.

The Ministry of Trade and Commerce has officially declared the Uchta district in Vologda as petroliferous, and in the future, explorations for oil in the district by any private person are to be prohibited.

There have been many attempts made in the past by the Government as well as by private persons to establish an oil industry in the district, but all have failed notwithstanding the fact that oil abounds in enormous quantities. The reason of past failures is very simple. The many prospectors who have obtained prospecting options from the Government had not had the least intention of really developing their plots, but simply intended to sell these as soon as an abundant supply of oil would have been discovered anywhere in the neighbourhood of their options. This policy soon developed into a kind of gambling speculation, but now all is stopped by the new measure of the Ministry, and new prospecting options will have to be taken in the usual way by auction.

The Ministry is now elaborating a scheme for a complete exploration of the district and so it is possible that in the near future new rich oil fields will be added to the Russian petroliferous areas.

THE PETROLEUM IMPORTS INTO MANCHURIA.

The imports of American petroleum into Manchuria during 1908, amounted to 5,773,651 gallons, as against 4,452,195 gallons in the previous year, whilst the imports from Sumatra increased during the same period from 417,000 gallons to 1,485,136 gallons. The previously announced intention of the Dutch Petroleum Co. to import the oil in tanks is so far justified that the Asiatic Petroleum Co. has constructed storage tanks at New Chwang to store the oil brought over in tankers. The same company is also building tanks at Liaoyang, Mukden, and Tiehling, and has made arrangements with the southern Manchuria railway for the carriage of the oil.

SOCIÉTÉ FRANCAISE DE PETROLE, LIMITED.

An agreement has been entered into between the Société Francaise de Petrole, Ltd., and the West Coast of Africa Oil and Fuel Company, Ltd., under which the former will acquire additional oil concessions covering a total area of approximately 100 square miles in the Gold Coast Colony, together with the sum of £40,000 cash, in consideration of the allotment of 176,000 fully paid shares of £1 each in the Société Francaise de Petrole, Ltd. Full details of the arrangement will be sent to the shareholders in due course, together with notices convening its necessary meetings of shareholders.

LONDON OFFICES AND SHOWROOMS OF THE E. W. BLISS COMPANY.

The E. W. Bliss Co., of Brooklyn, New York, U.S.A., have now established offices and showrooms at 114, Queen Victoria Street, London, E.C., where full particulars and estimates for plants for the manufacture of petroleum cans will be furnished on application. A number of automatic and labour saving machines can be seen in operation, in addition to their well known petroleum can machinery, and a visit to the firm's new showrooms is bound to be greatly appreciated.

THE OKLAHOMA PETROLEUM COMPANY.

An interesting document is the first annual report of the Oklahoma Petroleum Compagnie, of rhe Hague Holland. This company took over some properties in the well-known "Glenn Pool" in Oaklahoma, U.S.A., in February, 1908, and its first report therefore covers eleven months. The company owns and operated in the Glenn field only 80 acres, from which it obtained during the eleven months under review 1,015,000 barrels of crude oil. According to the profit and loss account, this oil netted the company, after paying royalties and operating expenses, about $209,000, and the Dutch company realised, after making substantial provision for depreciation, etc., 295,000 guilders net profit. Out of this a dividend was paid on its shares of 7 per cent., and the remaining sum of about 188,000 guilders was applied towards the acquisition of new property in the Glenn Pool. This new property, as stated in the report, covers 160 acres, so that the Oklahoma Petroleum Compagnie now owns a continuous tract of 240 acres in the Glenn field.

It is interesting to mention that the directors of the company are Messrs. H. Dean, E. Dean, S. F. Van Oss, W. A. J. Kessler, and H. De Ranitz.

AMERICAN EXPORTS OF PARAFFIN WAX.

The February exports of paraffin wax from America were as under (in pounds) :—

Exported to—	1908.	1909.
United Kingdom	12,578,776	4,786,096
Belgium	49,568	61,783
France	46,156	28,577
Germany	295,705	284,631
Italy	540,561	363,010
Netherlands	108,408	42,672
Other European Countries ..	587,961	491,308
Central American States and British Honduras	154,133	91,501
Mexico	1,227,409	2,067,976
South America	40,052	23,001
Japan	388,372	4,100
British Australasia	62,909	378,106
Other Asia and Oceanica ..	341,278	1,112,219
British Africa	193,682	60,135
All Other African Countries ..	—	—
Other Countries	1,420	3,260

BAKU CRUDE OIL FOR FUEL PURPOSES.

For the last few years a large quantity of oil has been used in the Baku oil districts as fuel. Taking the last ten years, the consumption of oil for fuel purposes in Baku was :—

1899	10·5	per cent.	of the total	quantity	produced.
1900	11·6	,,	,,	,,	,,
1901	10·0	,,	,,	,,	,,
1902	10·4	,,	,,	,,	,,
1903	10·7	,,	,,	,,	,,
1904	11·3	,,	,,	,,	,,
1905	11·4	,,	,,	,,	,,
1906	10·8	,,	,,	,,	,,
1907	13·1	,,	,,	,,	,,
1908 (9 months)	15·6	,,	,,	,,	,,

The reason of this increase in the consumption of oil in Baku for fuel purposes is to be found in the opening of a large number of new bores of small productivity, and in the gradual decrease in the productivity of the old wells. For this very reason, this increase in the use of oil as fuel on the fields is very undesirable.

The Council of the Baku oil producers publish in the "Obzor for 1907" the following figures :—

	Petroleum. Per cent.	Gas. Per cent.	Electricity. Per cent.
Used in producing.			
Balakhany	81·2	18·0	0·7
Saboontchi	82·4	13·3	0·7
Ramany	71·6	—	28·4
Bebe-Aibat	90·0	—	10·0
Used in boring purposes.			
Balakhany	81·1	18·9	—
Saboontchi	78·0	4·9	17·1
Ramany	63·9	—	36·1
Bebe-Aibat	86·5	—	13·5

From the above figures it is seen that electrical power has been in extensive use in the Ramany field, for it has been the means of producing 28·4 per cent. of oil, and in boring 36·1 per cent. On the Saboontchi area the corresponding figures are 13·3 per cent. and 17·9 per cent. As regards gas it has been used in Balakhany and Saboontchi only.

The proportion of oil used as fuel to the oil produced was :—Balakhany, 24·9 per cent.; Saboontchi, 14·2 per cent.; Ramany, 12·7; average for the three areas 16·5 per cent.; Bebe-Aibat, 12 8.

The low percentage on the Bebe-Aibat field is explained by the considerable productivity of this area. Naturally the productivity of the area is of importance in the consumption of fuel generally and of oil particularly. But taking the whole of the petroliferous area it is an undoubted fact that the yield of oil in Baku is diminishing, and in 1908, for instance, it was about 12,000,000 poods less than in 1907, while the percentage of oil used as fuel in the district was 2·3 per cent. higher.

The best way to minimise the use of oil for fuel purposes would be by way of larger consumption of gas and electricity.

◆

The Burmah Oil Company, Ltd., have removed their offices in London from Palmerston House to Winchester House, Old Broad Street, E.C.

TENDERS FOR PETROLEUM INSTALLATION AT FAMAGUSTA, CYPRUS.

Whereas, the Government of Cyprus has received applications from various persons for a lease of Government land at Famagusta and for permission to erect thereon Petroleum Tanks and Stores, and a Factory, in order to supply local requirements and also to form a distributing centre for the ports of Asia Minor, Syria, Egypt and the Levant;

Notice is hereby given that the Government is prepared to receive offers for a lease for such period and on such terms as may be proposed. The Government does not bind itself to accept the highest or any offer. The basis on which such a lease will be granted is as follows :—

1. The site on which the works are to be erected consists of the sandy beach lying seawards of the North-East Curtain Wall, extending from Othello's Tower to the North East Bastion, as shewn in the Admiralty Chart No. 847 of Famagusta and Salamis, with corrections up to August, 1906. The length of the plot of beach available is about 500 ft., with a maximum width of 115 ft. and a minimum of 60 ft., having approximately an area of 4,500 sq. yards.

2. The premises to be constructed to the satisfaction of Government, and in such a manner as to prevent all risk of a conflagration endangering neighbouring property or shipping should a fire take place on the premises. The oil to be pumped from a ship lying in the outer harbour through a flexible hose pipe to the tanks on shore.

3. The working of the industry to be carried on in accordance with such Rules and Regulations as the High Commissioner in Council may from time to time lay down; but, generally speaking, the Thames Conservancy Bye-Laws (under the Petroleum Acts, 1871 and 1879) will apply, subject to modifications to meet local conditions.

4. No transit duty would be levied on Petroleum imported from elsewhere, and re-shipped to foreign countries; but a small wharfage charge would be made.

5. No import duty would be levied on tin plates imported for the manufacture of cans; provided that the manufacture was conducted in bond and the cans not passed into the Island for local use.

6. Machinery is admitted free of duty.

7. The Customs duties charged for imports into the Island have no relation to those of the Ottoman Empire, but are regulated by Cyprus Law. The present duty on Petroleum is 1½ copper piastres (two-pence) per gallon in barrels, and 1/- per case of 7 gallons.

8. The imports of Petroleum at the three principal ports of Cyprus during the last three years were :—

	Famagusta. gallons.		Larnaca. gallons.		Limassol. gallons.
1906 ..	59,535	....	270,525	....	100,114
1907 ..	114,950	....	179,083	....	41,447
1908 ..	299,117	....	205,828	....	57,975
Average ..	157,867	....	218,479	....	66,512

Tenders will be received, addressed to the President of the Tender Board, Government Offices, Nicosia, Cyprus, up to the 30th September, 1909.

J. E. CLAUSON, *Chief Secretary to Government.*

15th March, 1909. (C.S. 1518/07.)

CLASSIFIED IMPORTS INTO UNITED KINGDOM UP TO APRIL 19th, 1909.

IN GALLONS.

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Country.	Illuminating.		Lubricating.		Residuals.		Gas Oil. (Solar)		Benzine.		Fuel Oil.		Other Descriptions.		Totals.	
	Since Apl. 3.	From Jan. 1.	Since Apl. 3.	From Jan. 1.	Since Apl 3.	From Jan. 1.	Since Apl. 3.	From Jan. 1.	Since Apl. 3.	From Jan. 1.	Since Apl. 3.	From Jan. 1.	Since Apl. 3.	From Jan. 1.	Since Apl. 3.	From Jan. 1.
Austria ...	—	—	10,000	34,930	—	149,850	—	—	—	—	—	—	—	—	10,000	184,780
Belgium ...	—	70	36,170	214,150	—	—	—	—	—	—	—	—	—	—	36,170	214,220
Canada ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dutch India.	—	400	—	—	—	—	—	—	1,076,710	6,738,600	—	80	—	80	1,076,710	6,739,160
Germany ...	14,840	224,000	36.230	296,730	—	2,000	—	—	1,000	1,000	—	—	4,570	9,210	56,640	532,940
Holland ...	—	300	200	1,660	—	—	—	—	918.700	2,006,410	—	—	5,970	19 770	924,870	2,028,140
Roumania ...	—	3,605,450	—	—	24,000	24,000	—	2,191,800	615,180	1,553,540	—	—	—	—	639,180	7,374,790
Russia ...	1,852,520	8,187,570	1,365,630	3,247,290	—	119,750	—	—	—	886,540	—	—	—	63 780	3,218,150	12,445,400
U.S.A. ...	5,536,320	39,202,170	1,708,395	13,574,415	8,560	47,880	3,656,310	19,365,140	—	5,320,240	7,490	3,211,520	19,630	1,243,010	10,936,705	82,023,905
Other Countries	—	800	3,680	14,130	—	—	—	1,000	—	887,380	—	240	—	1,600	3,680	905,150
	7,403,680	51,220,760	3,160,305	17,383,305	32,560	343,480	3,656,310	21,557,940	2,611,590	17,393,710	7,490	3,211 840	30,170	1,337,450	16,902,105	112,448,485

AMERICAN NOTES.

Oil at Marathon.—Owing to plentiful indications of the presence of oil at Marathon, Texas, a test well is being sunk by a group of operators.

Texas Shipments Improving.—The vessel shipments of refined petroleum products from Texas ports during March made a new record, amounting in all to nearly 800,000 barrels.

The Test for Oil and Gas.—A report states that a considerable quantity of land in Centralia, Illinois, has been purchased by Hornoll capitalists for the purposes of testing for both oil and gas.

Gulf Coastal Production.—The production of oil in the Texas and Louisiana districts now stands at a lower ebb than at any time in the history of the oil industry of that section of the American fields. The total output cannot, to-day, be placed at more than 32,000 barrels.

A New Company for Louisiana.—It is reported from Martinville, La., that a new company, under the title of the Cypress Island Oil and Mineral Co., has been formed with a capital stock of $15,000 to exploit lands on Cypress Island. Drilling is to be commenced without delay.

Through Rates for Crude Petroleum Wanted.—The Gulf Coast Navigation Co., of Texas, has applied to the Interstate Commerce Commission to issue an order compelling several railways to agree upon and establish joint through rates for crude petroleum between points in Louisiana and Texas.

Activity in the Grand Cave District of Louisiana.—Considerable activity is now being centred by oil men in the district of Grand Cave, Louisiana, where nearly 20,000 acres of land have been leased for the purpose of prospecting for oil. The outlook for success is said to be exceedingly promising.

To Continue to Drill in Colombia.—At a recent meeting of the stockholders of the Martinez Oil Co., it was reported that progress upon the company's 14,000 acres of territory near Cartagena had been very slow, so far two wells having been drilled only to a depth of 250 feet. It was decided to continue work with a rotary, owing to the difficult nature of the stratum.

Mid-Continent Oil Runs and Deliveries.—The average daily runs of the Prairie Oil and Gas Co. in the Mid-Continent fields during March were 79,000 barrels, and the average deliveries 70,550 barrels, thus shewing about 8,500 barrels going into storage each day. During March the adverse conditions in this field were accentuated by the passage of the much-dreaded Yeager-Strain West Pipe Line Bill.

The Transportation Problem in the Santa Maria Field.—The lack of transportation facilities in the Santa Maria field still continues to hamper operations. The narrow gauge railway which runs from Port Harford through Santa Maria is said to be a painfully slow line, and quite out of date for the requirements of the oil industry, and though to-day pipe lines have somewhat relieved the situation, there is yet considerable room for improvement.

RUSSIAN NOTES.

To Exploit Maikop.—A new company has been formed under the name Olacsea Bebe-Aibat Petroleum Co., for exploring for and production of petroleum in Maikop and other localities on the Caucasus. The capital of the company will be 700,000 roubles.

Studying the Baku Industry.—The delegates of the Standard Oil Co. who have been for some weeks studying the Baku oil industry, in view of renting petroliferous plots, have now left for Transcaspia for the purpose of exploring the new oil fields in Transcaspian and Ferghana districts.

A Significant Discovery.—Petroleum in very large quantities appeared from many earth-cracks near a station of the Transcaucasian Railway, Aliat. The oil is forming large lakes, inundating the railway over a great distance. The oil is very pure, without any trace of tar and other impurities.

Success at Maili Sai.—In one of the new boreholes on the concession of Prince Khilkoff, in Maili Sai, in Ferghana, an abundant spring of oil has been discovered, which yields several thousand poods daily. The concession has been lately inspected by Nobel's representatives, in view of the purchasing of the property by this firm.

A Committee of the Industry of Commerce has decided in favour of establishing a Chair for petroleum subjects at the Mining Institute, in St. Petersburg and Ekaterinaslav, and at the Donetzki Polytechnic. These subjects will include:—Production, geology, geography and genesis of petrolenm, refining, transport, storage, statistics, etc.

To Develop Sakhalin.—An English company has approached the Russian Government in view of obtaining a concession for exploitation of petroleum in the Russian territory of Sakhalin. The Russian Goverment is quite willing to grant the concession under the condition that the company should include a certain number of Russian shareholders.

Important Experiments.—The *Neftiannoie Dielo* publishes a very interesting report of T. Piterski on his experiments of determining the equivalent between petroleum and Surakhany gas in the heating of boilers. Hitherto it has been taken that 600 cubic feet of gas equals one pood of oil. Now the experiments of Piterski made in the most accurate and scientific way prove this equivalent to be of 770 feet of gas to the pood of oil.

Export of Mazout.—The Italian Government has sent a special delegate to Russia to study the question of the export of mazout into Italian ports. The reason of this is the growing interest the Navies are taking now in the use of liquid fuel. The export of mazout abroad has never been large, but since the beginning of the present year it has suddenly increased to a comparatively large figure, namely, for January and February 987,000 poods (January to March, 1907, the figure was 357,000 poods). There is every reason to believe that the export of mazout will make a considerable change in the Russian petroleum trade.

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Exceptional facilities for the storage of all kinds of . . .

PETROLEUM PRODUCTS in bulk and barrels.

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Warehouse Receipts and Warrants accepted by all Banks.

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,, 3831 MANCHESTER

LATEST QUOTATIONS OF PETROLEUM SHARES.

ENGLISH COMPANIES.

This list is restricted to companies who have paid dividends or who are producers.

Company.	Capital Paid Up.	Value of Shares.	Latest Prices
Assam Oil	£205,000	£1	16/3-17/3
Baku Russian Petroleum ..	£750,000 Ord.	£1	0/3-0/6
,, ,, ..	£650,000 5½% Pref.	£1	0/6-1/0
Bibi-Eybat Petroleum Co. ..			4/6- 5/6
Californian Oilfields	£385,000 Ord.	£1	5¼-5½
Commonwealth Oil Co. Pref	fully paid (Prem.)		$\frac{9}{16}$-$\frac{11}{16}$
,, ,, Def..	£1 fully paid		$\frac{9}{16}$-$\frac{11}{16}$
European Petroleum.. ..	£550,000 Pref.	£1	0/1½-0/4
,, ,, ...	£550,000 Ord.	£1	0/1-0/2
,, ,, ...	£376,000 Deb.	£100	66-70
Russian Pet. & Liquid Fuel ..	£500,000 6½% Pref.	£1	1/6-2/6
,, ,, ...	£600,000 Ord.	£1	1/3-2/3
Schibaieff Petroleum ..	£575,000 6% Pref.	£5	$\frac{3}{16}$-$\frac{5}{16}$
,, ,, ...	£575,000 Ord.	£1	0/3-0/9
Shell Transport & Trading ..	£2,000,000	£1	56/6-57/6
,, ,, ,, ..	£1,000,000 Pref.	£10	10¾-11
Spies Petroleum Company ..	£387,500	10s.	11/0-11/6

RUSSIAN COMPANIES.

Company.	Nom. Value in Roubles	Quotations on March 22nd	
		Lowest Roubles.	Highest Roubles
Baku Naphtha Co.	100	314	315
,, ,, ,, (issue of 1908) fully pd.	100	–	280
Balakhany Naphtha Co.	250	—	—
Caspian Society	1,000	3,775	3,800
Mazout Co.	250	—	—
Melikoff, A. C.	250	—	—
Mirzoeff Bros.	250	—	—
Naftalan Co.	250	—	—
Naphtha Co. "Kavkas"	250	—	—
Naphtha Trading Co., A. I. Mantacheff & Co.	250	126	128
Neft Co.	250	—	—
Nobel Bros.	5,000	10,500	10,575
,, ,, ...	250	—	—
Rops and Co. V...	250	—	—
Russian Naphtha Co.	250	—	—
Society Mazout	250	—	—
Ter-Akopoff Co.	250	—	—
Tumaieff & Co., J. G.	250	—	—
Volga-Caspian Naphtha and Trading Co	250	—	—
,, ,, ,, (Second Issue)	250	—	—

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Company.	Capital Paid Up.	Value of Share.	Latest Prices.
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Do. 6% Cum. Pref. .	£100,000	£10	£12 13s. 9d.
Burmah Oil, Ord.	£1,100,000	£1	£5 8s. 0d.
Do. Pref.	£250,000	£1	£1 8s. 0d.
Dalmeny Oil Co., Ord. (7 paid) ..	£37,800	£8 10s	£4 0s. 0d.
Do. 5% Pref ..	£18,900	£7	£4 12s 0d.
Lobitos Oilfields, Ltd. (£1).. ..	£275,000	£1	£1 6s. 6d.
Oakbank Oil Co., Ltd , Ord.	£170,000	£1	£1 18s. 3d.
Do. Pref. (£1 paid)	£36,980	£1	£1 4s 0d.
Do. Do. (£1 paid)	£63,020	£1	£1 3s. 6d.
Pacific Oilfields, Ltd. (£1)	£200,000	£1	£1 4s. 6d.
Pumpherston Min.Oil Co.,Ld.,Ord (17s. paid)	£110,500	17s.	£11 0s. 0d.
Do. 6% Cum. Pref	£100,000	£10	£14 0s. 0d.
Tarbrax Oil Co., Ltd. Ord. (£1 pd.)	£38,350	£1	£2 14s. 3d.
Do. 6% Cum. Pref.	£35,000	£1	£1 5s. 0d.
Young's Paraffin Co., Ltd., Ord. ..	£452,808	£4	£3 7s. 0d.
Do. "B" Deb...	£150,000	£100	£164 0s.

DUTCH COMPANIES.

Company.	Latest Quotations (per cent.)
Dordtsche Petroleum Co. (Ord.)	148¾
,, ,, ,, (Pref.)	165½
Int. Roum. Petroleum Co.	21
Royal Dutch Petroleum Co...	411
Mœara Enim Petroleum Co.	185
Oklahoma Petroleum Co. (Pref. "A")	119¾
Perlak Petroleum Co.	135½
Sumatra Palembang Petroleum Co.	152½
Zuid Perlak Petroleum Co. (Pref.)..	155¾
Union Petroleum Co.	93¾
Bibi-Eybat Petroleum Co.	29¾
Russian Petroleum and Liquid Fuel Co. (Ord.)	10¾
,, ,, ,, (Pref.)	12⅜
,, ,, ,, (6% Debs.) ..	35¼
Schibaieff Petroleum Co. (Ord.)	4⅞
,, ,, (Pref.)	5½
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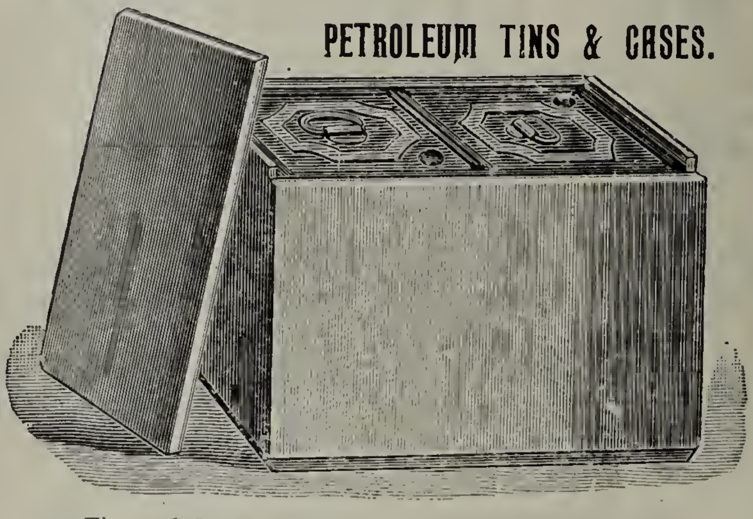

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THE
PETROLEUM REVIEW,
45, St. Mary Axe, London, E.C.
American Office: 150, Nassau Street, New York.

Saturday, April 24, 1909.

THE COMING PETROLEUM STANDARDISATION CONFERENCE IN LONDON.

IN exactly a month from to-day there will be meeting in the Metropolis one of the most important Commissions ever yet organised in connection with the petroleum industry—we refer to the Committee for securing the standardisation of the methods of testing petroleum products, and it is hoped that as a body, the English members of the petroleum trade will rise above their humble selves, and extend a cordial greeting to our international guests in every way worthy the occasion.

It is perhaps well to recollect that it was during the holding of the third International Petroleum Congress at Bucarest, in 1907, that there was a general expression of opinion in favour of a strong and thoroughly representative Committee was appointed to go into the question of the standardisation of the methods of testing petroleum and to endeavour to secure this if possible throughout the world. The importance of the mission which this Committee has been charged to carry out will be the better understood if we divide it under three headings, for these embody the main objects which the members are desirous of achieving. These are: (1) the unification of international methods for the testing of crude petroleum and its products; (2) introducing an international nomenclature for all petroleum products; and (3) assisting in the framing of regulations which shall be international in character, regarding the transport of petroleum and its products both by land and sea.

The Committee has been drawn from almost the whole of the European countries as well as from the United States, and consists of the following gentlemen:—Austria-Hungary, Prof. Zaloziecki and Dr. Singer; Belgium, Mr. M. F. Nicholas; England, Sir Boverton Redwood and Dr. P. Dvorkovitz; France, Prof. Tassily, Desvignes and M. Guiselin; Germany, Dr. L. Weinstein and Dr. Ubbelohde; Holland, Dr. Loudon; Italy, Prof. Villavecchia and Dr. Cateano; Roumania, Dr. Edeleanu and Dr. Aisinman; Russia, Prof. Charitschkoff and Dr. Gcuchmann; and the United States, Dr. David Day.

Since its appointment it has been conducting its investigations quite energetically, the general secretary—Dr. Ubbelohde of the Technical College, Karlsruhe - having thrown himself heart and soul into the difficult task before the Committee. He has devoted considerable time and energy in order to bring the respective questions before the various governments so that the solution of the problems may be facilitated, and it is owing to this gentleman's arduous labours that the adhesion of practically every European Government has been secured.

There is not a single individual interested in the petroleum industry, who can be reasonably excused for not taking an intelligent interest in the work of this Standardisation Committee. In itself, it is of great importance—yet an importance which is not easily appreciated. It is a fact that to-day both in Europe and throughout America, the methods for testing petroleum are so diverse that it is frequently almost out of the question to make correct comparisons. For example, in America alone no less than six kinds of apparatus are used for flash test purposes, all of which differ from the Abel-Pensky instrument used generally in Europe, a fact which conclusively proves the utter inconsistency of the testing methods now adopted.

The meetings in London will occupy two or three days, but inasmuch as the Congress of the Applied Chemistry meets almost simultaneously, of which body the members of the Petroleum Testing Committee are members, it is quite possible that there will be several meetings held between the dates of the opening and closing of the Chemical Congress. It is, however, of the two days – May 24th and May 25th—that we would especially speak, for it is upon these days that the Committee will meet in order to apportion various parts of its work to the members most qualified to take up that special phase of the problem. The members of this International Committee are engaged upon a work the importance of which cannot be overestimated, and it is only in accordance with precedent that while they are our guests, everything possible should be done not only for their comfort but also their enjoyment.

There are many who, when reading these lines, will almost unconsciously cast their mind back upon the enthusiastic way in which they have been received as delegates to the past three International Petroleum Congresses. It must be admitted that there has in the past been no absence of generosity whenever members of the great petroleum industry have travelled, in order that they might give their aid to the solution of those many problems which confront the industry. At Paris, at Liege, and latterly in Roumania, we have seen how loyal is the petroleum industry to those whom it can call its members.

As we have have said, the members of the Commission will within one month be in our midst, and let it not be said that we did not give them a hearty and sincere reception. There will be little time either for sight-seeing or convivial enjoyment, yet it is to be hoped even this will not be allowed to slip by unnoticed. It is a comparatively easy matter to arrange a programme which will be appreciated to the full by our guests, who will probably number about thirty, and it is a duty which the heads of our petroleum trade owe to the credit of themselves and the industry at large to see that our coming guests shall be received right royally.

It is hoped that this appeal—from every point of view thoroughly justified—will meet with the speedy response it deserves, and that Dr. Dvorkovitz, who has initiated the movement, will be assisted by every influential member of the petroleum industry in England in welcoming our international guests in no half-hearted manner on behalf of the great and growing petroleum trade of the United Kingdom, when they set foot in this country just prior to the 24th of May.

◆

DISCOVERY OF NATURAL GAS IN QUEENSLAND.

On the South-Western Railway line in Queensland about 318 miles from Brisbane, in the quiet town of Roma, hitherto mainly known as the commercial centre of a number of rural and pastoral industries, there has occurred a sensational discovery of latent natural forces such as have been rarely found to exist in the Southern hemisphere, and have been principally disclosed and worked in America and in a few other parts of the world. Queensland is distinguished among the Australian States for its peculiar mineral possessions. Its mine of graphite, its anthracitic coal on the Dawson, its meerschaum clay at Longreach, its manganese near Gladstone, and its famous Mount Morgan gold, as well as stores of many other metals, have shewn its marvellous subterranean riches; and now it is found that underlying the plains of the west, deep down beneath the triassic rocks, there are vast stores of pure illuminating gas, and probably of mineral oil.

A REVIEW OF THE PETROLEUM REFINING INDUSTRY IN ROUMANIA.

Being a Summary of an Article, by Mr. C. HALACEANU, Inspector of Finances, which appears in the current issue of the "Revue du Petrole."

The distillation of petroleum in Roumania began between 1850 and 1860, and may be grouped into three classes: small, middle and great. The great industry is, of course, of recent date, while the small of ancient times, and while this latter has developed but gradually, the former one shews sudden changes owing to the investment of considerable capital in it by the large companies. Another characteristic difference between the small and the large factories in the refining industry is that while the former is still based on ancient and primitive distillations, the latter is provided with the most perfect apparatus; the small concerns are very inactive and unproductive, and are therefore bound to disappear in the near future, thus affording more room to the great and progressive refining concerns.

All systems of distillation are used in the Roumanian refineries, the intermittent, the semi-continuous and the continuous. As everywhere else, the last mentioned system gives the best results, the quantity distilled in 24 hours being much larger and the consumption of fuel much less, as the heat of the residuals and the gases are utilised for heating the oil continuously pouring into the stills.

The capacity of the stills varies from less than one waggon to nine waggons. Of the total capacity of all the stills used in the refining industry 81·70 per cent. belongs to the large concerns, 10·28 per cent. to the middle class and 7·89 per cent. to the small refiners. But although the middle class firms possess a larger capacity of stillroom, the utilisation of this capacity is smaller than that in the small refineries. The figures representing the utilisation of the total capacity is as follows: For the large refiners 0·87, for the middle class 0·198, and for the small 0·293. The natural explanation of this apparently strange fact is that the stills used in the small refineries are so small that the distillation is completed in less than 24 hours, while in the middle class refineries it takes more than 24 hours to complete a distillation from a still of a much larger capacity (one to six waggons).

But the efficiency of work in the distilleries depends not only on the capacity of the stills but also on the heating surface in the latter. This naturally is much larger in large distilleries working on the continuous system. If we call *M* the quantity of oil distilled over in 24 hours and *S* the total heating surface of the still, we may call the proportion $\frac{M}{S}$ equivalent of work performed in the distillation process, and we will notice that this equivalent is constant for each system of distillation and namely, for:—

1. Continuous system with vertical and horizontal preheaters .. .. $\frac{M}{S} = 0{\cdot}15$
2. Continuous system with vertical preheater .. $\frac{M}{S} = 0{\cdot}1174$
3. Continuous system without preheaters .. .. $\frac{M}{S} = 0{\cdot}0965$
4. Semi-continuous system with preheater .. .. $\frac{M}{S} = 0{\cdot}0845$
5. Intermittent system with preheater .. .. $\frac{M}{S} = 0{\cdot}068$
6. Intermittent system with vertical preheater .. $\frac{M}{S} = 0{\cdot}087$
7. Intermittent system without preheater .. .. $\frac{M}{S} = 0{\cdot}074$

Expressed in this way the rate of distillation is very easy of calculation and at the same time allows of judging from the first the advantages under one or another system of distillation. Thus we see that according to the system the quantity distilled over in 24 hours in Roumanian refineries varies from 7 to 15 per cent. of the total heating surface.

NATURE OF PRODUCTS.—The separation of the products of the distillation is operated according to the gravities of the fractions in general. In the intermittent distillation the separation is as follows:—

Crude benzine up to 0·785—0·790.
Kerosene between 0·785—0·790 and 0·860.
Gas oil ,, 0·860 and 0·890—0·895.
Residuals above 0·895

In the continuous distillation the fractionising will depend principally on the number of preheaters and stills. The distillation is operated in such a way that each unit should give a distillate of a certain gravity. As an example we will take a continuous system instillation formed at one vertical preheater, three horizontal preheaters and six stills, the operation gives the following results:—

The vertical preheater gives a distillate of gravity		..	0·698 *
The horizontal	No. 1	,, ,, ,, ..	0·705 *
,,	No. 2	,, ,, ,, ..	0.708 *
,,	No. 3	,, ,, ,, ..	0·712 *
The still	No. 1	,, ,, ,, ..	0·775 *
,,	No. 2	,, ,, ,, ..	0·807 **
,,	No. 3	,, ,, ,, ..	0·821 **
,,	No. 4	,, ,, ,, ..	0·842 **
,,	No. 5	,, ,, ,, ..	0.863 ***
,,	No 6	,, ,, ,, ..	0·882 ***

* Also crude benzine 0·755.
** Also of kerosene of gravity of 0·892 and flashpoint 31—32° C.
*** Also gas oil ,, 0·872 ,, 85° C.

After condensation the crude benzines are submitted to the rectification in closed stills provided with dephlagmators by means of steam superheated to 250° C. Usually the crude benzine used for rectification is of specific gravity 0·750—0·755, and gives the following products:—

1. Light benzine, distilling between 0·635 and 0·757.
2. Heavy ,, ,, ,, 0·757 " 0·763.
3. Residue of a gravity 0·787 to 0·795 and flash of 24° C. to 27° C.

The yield in light benzine is 39 per cent., heavy 8 per cent. and residue 51 per cent. The loss is 2 per cent. The percentage of fuel used in the steam making for rectification is about seven.

(To be concluded.)

THE EXPLOITATION OF THE PETROLIFEROUS STATE PROPERTIES IN ROUMANIA.

AN IMPORTANT NEW LAW.

On March 31st the Roumanian Minister of Industry and Commerce introduced for discussion in the Roumanian Chamber the project of a new law regulating the exploitation of the petroliferous State properties. A few days later the project with a few modifications was passed, and therefore we publish the various clauses of the new law *in extenso.*

The Minister of Industry and Commerce is authorised to determine which territory situated in the State properties is to be declared as petroliferous.

These territories can be leased by public auction for exploitation to the extent of three-quarters of their total area in lots of a maximum of 30 hectares, but at Moreni the maximum will be ten hectares. The remaining quarter being reserved for the State, cannot be leased to private persons unless by a special law.

The term of the concession will be for thirty years. Of the three-quarters to be conceded, one will be granted only to companies whose shares will be personal and reserved exclusively for Roumanian subjects; another quarter to companies already existing who will have to deposit 500,000 francs, and the third quarter to any persons offering the highest prices.

More than one lot may be conceded to the same person or company, with the restriction that the distance between the lots must exceed one kilometre.

Persons desiring to obtain concessions will have to deposit the sum of 50,000 francs as guaranty for satisfying all the conditions attached to the concession. This deposit will remain in the State treasury until the concessionaire proves that he has drilled at least three productive wells on the conceded plot.

The adjudication will be by way of closed offers, and overbiddings are absolutely prohibited.

The concessions taken in the name of intermediary persons will be declared nil, and the concessionnaires will forfeit the deposit and cannot claim any repayment for work executed by them on the conceded area.

The amalgamation of two or more concessions situated in the same district is prohibited, and will be followed by the cancelling of the conceded plots.

The State does not warrant the value and productivity of the concession.

Announcement of any adjudication will be published 30 days before the date fixed for it and will include the district and numbers of the plots, the area of each plot, the total number of wells to be drilled on each plot, the distance to be left untouched between the wells and the depth of such wells.

These announcements will be published in the *Moniteur Officiel*, and by way of placards in the offices of the Ministry of Commerce, and in the respective town halls of the districts where the plots are situated. A map of the petroliferous district with all the lots indicated will be at the disposal of everyone interested at the Ministry of Commerce.

The concessionnaire will have to pay in advance to the State at an annual rent of 25 francs per each hectare or fraction of hectare conceded. If a certain proportion of the oil produced, namely, nine per cent. of the yield of the well does not exceed 10 tons a day, 12 per cent. of it is from 10 to 50 ton, 15 per cent. from 50 to 100 and 20 per cent. of the daily production in the well exceeding 100 tons. The daily production will be calculated from the month, dividing it by the number of working days. The accounts will be made once per month, and payments at the end of the year in cash or oil.

The concession will be granted to persons offering the State the payment of the maximum tax, and in case this offer will not reach the provisions of the Ministry a second adjudication could be fixed, and in case of failure of the same, the plot will be conceded under the obligation of paying the legal minimum tax.

The concessionnaire cannot delay starting works on the allotted ground more than for six months, and will have to drill at least two wells every year. The total number of wells to be drilled and all other details regulating the works on the conceded plot will be fixed in the publications aforementioned.

The concessionnaire will have to conform to all laws and regulations existing and to be made. All laws and regulations made before the publication of the present project of law are abrogated.

PRODUCTION OF ENGLISH COMPANIES IN RUSSIA.

Baku Russian Petroleum Co., Ltd.—The production for the week ended 10th April was 195,650 poods, or 3,154 tons; and for the week ended 17th April was 209,250 poods, or 3,373 tons.

Russian Petroleum and Liquid Fuel Co., Ltd.—The production for the week ended 10th April was 189,000 poods, or 3,047 tons; and for the week ended 17th April was 183,000 poods, or 2,950 tons.

Spies Petroleum Co., Ltd.—The production for the week ended 11th April was 224,940 poods, or 3,628 tons. The total production for year to 11th April was 3,165,280 poods, or about 51,069 tons. The total production for the corresponding period last year was 3,429,175 poods, or 55,309 tons. The output for the week ended 18th April was 241,075 poods, or 3,888 tons. The total production for year to 18th April was 3,407,355 poods, or about 54,957 tons. The total production for the corresponding period last year was 3,725,015 poods, or about 60,081 tons.

The European Petroleum Co., Ltd.—The production for the week ended 11th April was 142,570 poods, or 2,298 tons; and for the week ended 18th April was 137,384 poods, or 2,215 tons.

TEMPORARY ADDRESS.

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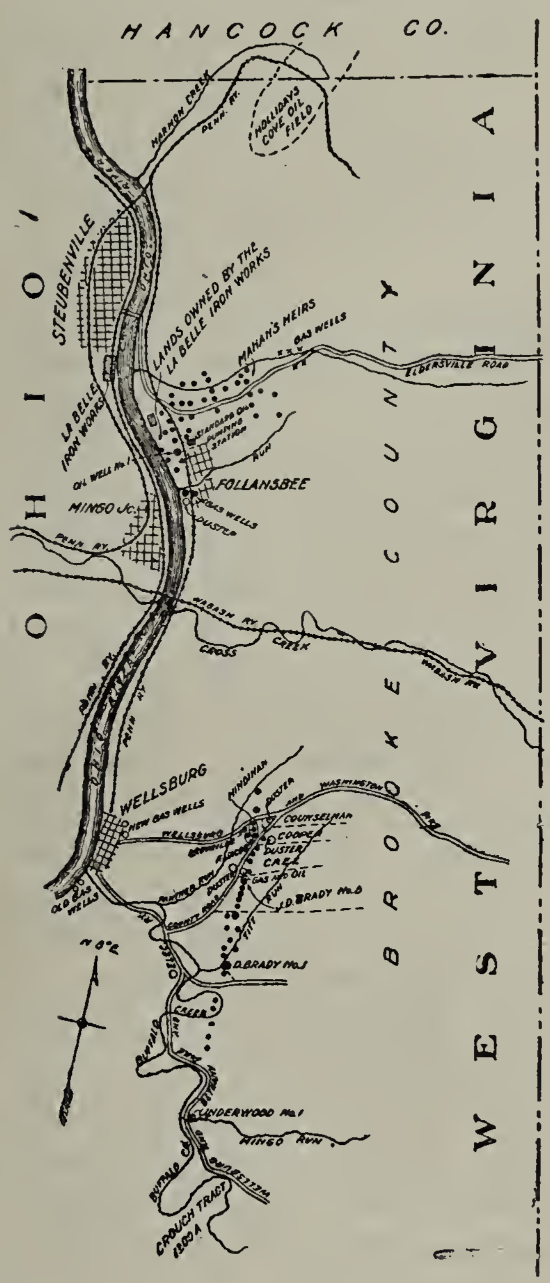
THE FOLLANSBEE FIELD OF WEST VIRGINIA.

THE HISTORY OF ITS DEVELOPMENT.

In a recent issue of our American contemporary, *Mines and Minerals*, an interesting article appears from the pen of Mr. Frank W. Brady, in which he describes the history of the developments in the oil fields of Follansbee, West Vinginia, its production, and the general conditions which govern the industry there.

The author points out at the commencement of his article that since 1907 considerable additional development has been done on the Buffalo Creek pay streak, and in addition to this, two remarkable fields have been opened up, one at Follansbee and one at Holliday's Cove. The Follansbee field is located in Brooke county, on the bottom along the Ohio River, some four miles north-west of the original Brooke countty field previously described. The map, in Fig. 1, shews the present state of the development and the relative locations of the three fields, and map No. 2 shews how the wells are located in one of the most interesting portions of the Follansbee field.



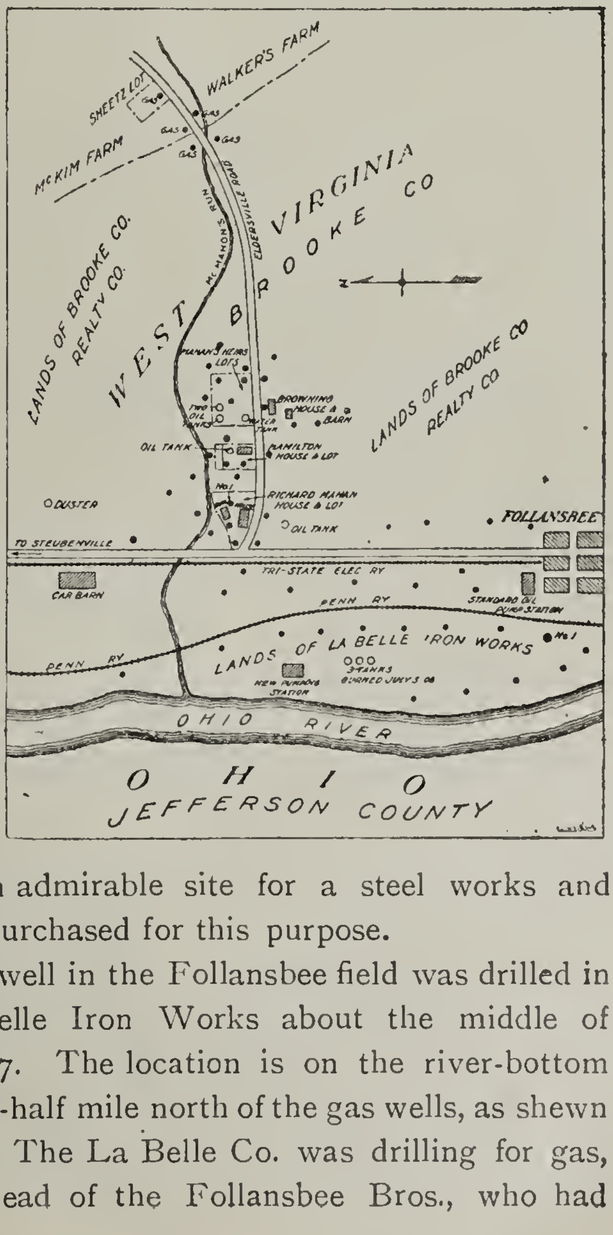
The development in the Brooke county field began some seven years ago with the Underwood well, No. 1, and there was a line of producing wells following the pay streak from 400 feet to 500 feet wide, for a distance of about four miles, as described in the article previously mentioned. During the past year the development of the Brooke county field continued in a regular and systematic manner, and quite a number of good producers have been drilled in. Several "dusters," however, resulted from drilling wide of the pay streak, and as yet no definite connection has been discovered between this field and any of the others that lie north-east and west of it. Some of the wells are furnishing both gas and oil in paying quantities, and several of the wells are good gasers. There is another oil sand about 100 feet below the Berea grit, but this has been found to be barren wherever tested in the Brooke county field. There is considerable activity in oil and gas leases, especially to the south and west of this field, extending to the Ohio River and to Wheeling.

The Follansbee oil field is a wonder. It has wells that have produced as high as 700 barrels of the best grade of amber oil in 24 hours. This field also has some excellent gas wells that started out with a production of 6,000,000 feet per day.

The Follansbee field consists of two large tracts owned by corporations, and several farms and small tracts, these tracts being in some cases single building lots 100 feet by 150 feet. Owing to the large number of land owners in the district and to the fact that they have acted independently in the oil development, an unusual number of derricks have been erected. For example, in one section there are 18 or 19 derricks on a tract said to be not over two acres in extent. Some of the wells are not more than 60 feet apart. A year ago a single gas well at the lower end of the town of Follansbee represented the entire development of this field. The second well proved a duster, but the third like the first is a good gas producer. There are also some excellent gas wells farther down the river at Wellsburg.

The Ohio Valley Realty Co. purchased 600 acres, or practically all of the Mahan estate excepting some reservations made by the Mahan heirs that proved of special interest later on when the oil was discovered.

The La Belle Iron Works of Steubenville, Ohio, have purchased about 200 acres of the Mahan estate from the Ohio Valley Realty Co.; this land bordering the river north and west of the town of Follansbee, is bounded on the east by the tracks of the P. W. and Ky. division of the Pennsylvania railway. The land is an admirable site for a steel works and was probably purchased for this purpose.



The first oil well in the Follansbee field was drilled in by the La Belle Iron Works about the middle of December, 1907. The location is on the river-bottom tract about one-half mile north of the gas wells, as shewn in map No. 1. The La Belle Co. was drilling for gas, following the lead of the Follansbee Bros., who had been successful with two wells and were making good use of about 2,000,000 feet per day of the gas in the well at their tin plate works. No preparations had been made for taking care of the oil, as its discovery was entirely unexpected, and hence considerable oil was lost before the necessary tank and accessories could be put up. Following the oil discovery there was an immediate scramble for leases on all the small tracts of land, and all the farms near the field were also leased. Large bonuses were paid in some cases for leasing privileges in addition to the regular royalty of one-eighth of any oil or gas produced. In one case a $6,000 cash bonus was paid. A very large number of wells have been drilled in, most of them starting out with a production of over 100 barrels per day. It is claimed the largest one of the La Belle Co. ran over 700 barrels the first 24 hours. Like all the wells in the Berea grit, however, they rapidly drop off in production and eventually become pumpers.

A general view of a part of the Follansbee field is shewn in Fig. 3, which is a photograph taken from the opposite side of the Ohio River.

While the La Belle company and others were drilling in the lower part of the valley, Mr. Richard Mahan put down a well in the barn yard on his small homestead, located in what is now called the upper field, as shewn in map No. 2. This well proved a good one, and two or three others have since been drilled in on the same plot. The Realty company began drilling a line of wells around the Richard Mahan plot, and also drilled a number of wells eastward along the Eldersville road. They got some good wells, but most of them proved small producers, starting out with about 20 barrels per day, and the one on the west line of the Hamilton lot was practically a duster. These results put a damper on the enthusiasm of those drilling on the Hamilton lot next to the duster, and also stopped the drilling of some proposed wells farther eastward. However, the Hamilton well, No. 1, came in fairly well, producing about 50 barrels per day, and a second well was put down on this small lot. The Realty company then drilled wells around the Hamilton, and also one south of the Eldersville road and farther east, and got some small producers.

The development of the field in the northern section was now practically at a standstill, when the romantic part of the development took place. When the Mahan farm was sold to the Ohio Valley Realty Co., a reservation of two building lots, 100 feet by 150 feet each, was made, and the right to locate these lots at will was given to Mr. Frank Mahan, who represented the six Mahan heirs. The location of this plot was delayed from time to time as there was nothing calling for an immediate decision. However, the location originally intended by the Mahan heirs was that finally decided upon and held and is shewn in map 2. This is a level plot along the north side of the Eldersville Road and was always looked upon as a specially suitable site for building purposes. When the oil devolopment made this neighbourhood of special interest, the Mahans called for a survey and a location as per the written agreement. There was a clash of interests and several very interesting incidents occurred before the final location of the lots was legally made. Although this plot was considered by some oil men as of little or no value for oil, the Mahan heirs as a company immediately proceeded to put down a well on the centre of the 200 feet by 150 feet plot. In doing this, they were under threat from the Realty Co., that should oil be struck, they would at once drill a row of wells around the lots. The 30-foot country road, however, gave some protection on the south of the plot. The drilling of this test well proceeded without incident and very little other development was carried on in the immediate neighbourhood. On May 12th, 1908, the Berea grit was tapped at a depth of 1,333 feet and a flow of oil started at a rate of about 600 barrels per day. Considerable of the first flow was lost, as there was not enough storage capacity immediately at hand to care for it. The unusually large production of this well from the top of the Berea grit, which is about 10 or 12 feet thick, and at a location where oil men considered little or nothing would be produced, set them all guessing again. A big rush was made to get in some more wells close to the gusher. Beginning to make preparations for another well on Friday afternoon the Mahan heirs had drilling begun the following Tuesday afternoon on well No. 2, located on the corner of the plot, as shewn on map No. 2, the entire rig being gathered and erected in this time, some of it being cut from the trees in the woods. The Realty Co. made haste with a well close up to the line not over 60 feet from Mahan No. 2. The Mahan No. 3 was started in the other corner of the lot, as will be seen by referring to map No. 2. Well No. 2 came in at from 200 to 300 barrels per day on June 12th, and No. 3 was completed shortly after. The peculiarity of these wells was their large production and also the fact that the oil came from the top of the Berea grit, while the Realty Co.'s wells surrounding the Mahan plot went much deeper into the sand before getting a flow. The production of the Realty wells was also very much less than any of the Mahan wells. The three Mahan wells settled down to a total production of about 600 barrels per day for several weeks, gradually dropping to an average of one-half or one-third of this amount. The average total production of the field as handled by the Standard Oil Co. station, located in a ravine at the north of Follansbee, is said to have been at one time about 3,500 barrels per day. It is much less than this now, despite the fact that many new wells have been drilled in.

While the Realty Co. has done a great deal of drilling, getting small producers in many cases, and some dusters, the La Belle Co. has followed a systematic plan of development. This has been possible in the latter case because the tract is better defined than that of the Realty Co. and there are no small or independent parcels of land located within the tract to injure their field. As shewn in the illustrations, the La Belle Co. has been drilling a row of wells along the railroad tracks and thus protecting its eastern boundary. It is also drilling a row of wells along the river front.

(To be concluded).

ENGLISH PATENTS.

(Specially contributed by Messrs. EDWARD EVANS & Co., Consulting Engineers, Chartered Patent Agents, and Enrolled Patent Attorneys, of the United States, of 27, Chancery Lane, London, W.C.

Applications Filed in Great Britain.

Improvements in or relating to Petrol and the like Lighting and Heating Apparatus.—Percy Currall Pace, 1, Imperial Buildings, East Croydon. No. 6941 of 1909.

Improved Regulator for the Supply of Petrol or Spirit to Motor Carburettors.—John Croft and Ernest Quéhen, 26, Church Road, Moseley, Birmingham. No. 8599 of 1909.

Improved Self-Starter for Petrol Motors and Combustion Engines.—Athole Victor Davis, 236, Iffley Road, Oxford. No. 8790 of 1909.

Improvements in or relating to Petrol and the like Lighting and Heating Apparatus.—Percy Currall Pace, 1, Imperial Buildings, East Croydon. No. 8782 of 1909.

Applications Published in Great Britain.

Vapourisers for Internal Combustion Engines.—Sydney Edward Jochimsen, William Rowland McKay and Alexander Munkittrick. No. 8096 of 1908.

This relates to vapourisers used in connection with petroleum and like internal combustion engines, and consists in surrounding the vapourising chamber with a jacket heated by the exhaust gases and providing the chamber with an inlet valve for admitting the petroleum or other fuel with or without air, and additional or auxiliary air inlets adapted to admit air directly into the vapourising chamber to ensure an efficient mixture of the same with the fuel vapourised therein. The auxiliary inlet tubes are made of different lengths, such tubes being fitted with means for controlling the inlet of air, the controlling means being independently or collectively operated. The vapouriser chamber is disposed eccentrically with relation to the jacket in such a way that the jacket and vapouriser are in contact along a line, the auxiliary air inlet tubes passing into the vapouriser at such place of contact.

Means for Indicating the Consumption of Petrol in connection with Petrol Tanks.—Motor Sundries, Ltd., and George Percy Bragg Smith. No. 5714 of 1908.

This relates to means for indicating the consumption of petrol in connection with petrol tanks, and consists in the combination with a liquid level indicator of a device whereby the level of the liquid at the time of examination and the level at the time of a former examination is demonstrated at one time by means of primary and secondary indicating hands or fingers; a removable box or casing is also provided, having a locking attachment to cover either the secondary hand or the set screw as the case may be, so as to prevent any tampering with the register when fixed.

NEW OIL COMPANIES.

BAKHTIARI OIL COMPANY, LIMITED.

Registered capital £400,000, in £1 shares. Objects, to acquire any petroleum or oil-bearing lands in Persia or elsewhere, to adopt an agreement with the Concessions Syndicate, Ltd., the Burmah Oil Co., Ltd., and Lord Strathcona and Mount Royal, and to carry on the business of dealers in and refiners of petroleum and other mineral oils, natural gas, asphalte, ozokerite or similar substances and the products thereof, mine owners, ship and barge owners and builders, etc.

RIO RAMIS PETROLEUM COMPANY, LIMITED.

Registered capital £50,000, in £10 shares. Objects, to acquire and work sixteen concessions of 240 hectares each, for extracting and dealing with petroleum and other mineral oil, known as "Concessions Lastauneau," situated on the banks of Lake Titicaca, in the Rio Ramis River, in Peru, and to win, store, transport, and distribute mineral oil and other products, etc. The signatories are:—J. N. Hedley, 52, Malvern Road, N., and W. H. Masters, 56, Whiskin Street, E.C. Private company.

ANGLO-SPANISH OIL SYNDICATE, LIMITED.

Registered on April 14th, with a capital of £10,000, divided into 10,000 ordinary shares. The objects of the company are to exploit for petroleum in Spanish territory, and to refine and export petroleum and its various products. The directors of the company are Messrs. George Macdonald, Colonel Herbert Swain Fitzgerald, C.B., L. W. Moore, and Douglas J. Neame. The company's registered offices are at Salisbury House, E.C.

* * *

The Import of Russian Kerosene into Vau.—Kerosene is the only article of Russian import allowed into Vau. It is imported there in cases which are brought over on donkeys from Karg, by way of Karaurgan and Igdizsa-Orgov. About 8,000 cases are imported yearly. The price at which it is sold at Vau is very varying—between 60 and 120 piastres per pood.

THE TEXAS COMPANY,
Transporters, Refiners and Distributors of Petroleum and its Products.

CRUDE BENZINE & DEODORISED BENZINE.

FUEL OIL AND GAS OIL
A Specialty.

LUBRICATING OILS.
HIGHEST GRADES. UNIFORM QUALITY.

"TEXACO" BITUMEN.
Over 99 % Pure Bitumen.

SCIENTIFIC NOTES.

KEROSENE IN GARDENING.

For gardening purposes kerosene can be used in the form of emulsion. The best way of preparing the same is to mix thoroughly in a barrel 1 gallon of kerosene with 2 lbs. of flour, to add then to the mixture about 4 gallons of water, stir for a few minutes and then fill the barrel with water. This emulsion will prove very effective for destroying every kind of garden blight.

THE FORMATION OF RUST MINIMISED.

To prevent the formation of rust inside boilers, experiments have been made at the Berlin Technical Institute, to use water deprived of the air it contains by means of charcoal. Sacks of freshly prepared charcoal have been put into the water reservoirs, from which the boilers were fed, and the decrease of rust in the boilers fed with this water has been about 25 per cent.

A NEW BRANCH OF SCIENCE.

A new branch of science has been developed by the many scientific works of the Russian petroleum scientist, M. A. Rakusin. In a paper recently read at the Russian Imperial Technical Society, M. A. Rakusin has discussed some of the principles of the "Geochemistry and Geomechanics of Petroleum."

THE PHYSIOLOGICAL PROPERTIES OF PETROLEUM.

The medicinal properties of petroleum have been known by man even in the remotest times of the history of human kind, but unfortunately they have never been made the subject of special scientific studies. Only quite recently have some medical authorities commenced experimenting with crude petroleum and its products. New light has been thrown upon the subject by the communication published this year of Professor of Medicine, Dr. W. Ebstein from Gottingen, under the title "Petroleum in Medicine." He reminds us of the case of two women from a Roumanian village, Doftana, who had been given up by the doctors as incurable consumptives, were entirely cured in a year's time by taking daily a few spoons full of crude oil. Rakusin strongly recommends experimenting on animals in view of ascertaining the action of petroleum as an inner medicine on the animal organism.

PETROLEUM FOR HEALING.

The great value of petroleum for healing skin diseases is well known. Petroleum products are widely used for hair-growing, and are probably effective in destroying the germs and parasites of the skin. Prof. Rakusin states that whenever he had his hands greased with oil a painless peeling of the skin on the palms of his hands took place, which ceased as soon as he stopped for some time to handle oil.

Two pharmaceutical preparations are made in Germany from Russian petroleum:—(1) Unguentum naphtalani (black), and (2) unguentum naphtalani cum zincoxid (greyish). Both are extensively used in Russia as a cure for serious skin diseases. A great many Russian scientists have proved that petroleum and its products are poisonous and will destroy life, vegetable and animal, wherever they are applied in large quantities. For instance, fish disappear from lakes and pools into which oil finds its way.

THE TIN PLATE MARKET.

Messrs. Norton, Owen & Co., of 4, Bishopsgate Street Within, London, E.C., report under date April 22nd, 1909, as follows:—

The market has revived during the past week. Buyers have been placing orders freely, having apparently realised that prices had reached a low level and that makers were not willing to sell forward at the low rates that have prevailed for some time past, consequently prices have advanced 1½d. to 3d. per box, and the outlook is altogether more cheerful. We quote oil prices to-day:—

IC	18¾ × 14	124 sheets	110 lbs.	11/10½ to 12/0 per box.
IC	19¼ × 14	120 ,,	110 ,,	11/10½ ,, 12/0 ,,
IC	20 × 10	225 ,,	156 ,,	16/10½ ,, 17/0 ,,

F.o.b. Wales. Tin lining and iron hooping extra.

GULF REFINING CO.,
Refiners of **Oklahoma and Texas Petroleum.**
We make a Speciality of
SUPERIOR LUBRICATING OILS *OF HIGH VISCOSITY AND LOW COLD TEST.*
Our Kerosene and Gasoline are manufactured from high grade Oklahoma Crude Oil.
Prompt Shipments from New York, Philadelphia, Boston, New Orleans and Port Arthur, Texas.
Special Prices to Large Jobbers and Refiners
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The American Oil Market.

New York, Week ended April 10th.

A comparison of the week's returns from the fields east of the Mississippi River with those of the former week shews comparatively little change, but the latter results are less favourable than those previously noted. There was one more completion during the current week, but the new daily production was lower by 151 barrels, and the duster list was increased by seven. The difficulty of transporting machinery and supplies over the roads seems to be the principal obstacle to the general resumption of active development work. In the fields of the Pennsylvania classification, says the *Oil, Paint and Drug Reporter*, the South-eastern Ohio section holds first place in completions and new production, but the record of dry holes exceeds that ot other high grade districts for the week. The duster list was especially impressive in Washington county in South-eastern Ohio, where considerable new development work was stimulated by the bringing in of a producer of unusual capacity near Scottown a couple of weeks ago. A recent gauge shewed this well to be maintaining a flow of 150 barrels per day. The results of these ventures were, on the whole, disappointing, and the prospects are far from encouraging for successful developments in the vicinity of this producer. An extension of the new development west of Steubenville was believed to be assured by the completion ot a test to the east, reported to be promising for a 40-barrel well. What was regarded as a result out of the ordinary was noted in the bringing in of a producer, rated at 25 or 30 barrels a day, from the Big Injun sand of the Osage pool. All of the other wells in that district got their pay from the Berea grit. In the Mingo formation of the same county a completion in the south-west extension was considered favourable for a 20-barrel well. In West Virginia operations there have been nothing to approach the record of Lincoln county for completed work, but the proportion of dry holes was larger for the week under review, and the new production was not up to its former record. The big line and Berea grit formations of that county are credited with a daily production close to 3,500 barrels, and shewing a steady increase. Some fine wells are reported north of the Delaware pool, and the possibilities of that development affords much speculation. Encouraging results have also been experienced north of the old Glenn pool, and the limits of the new formation are being gradually extended. Of principal interest in returns from the Gulf coast region is the stimulus that has been afforded to operations in the Sour Lake, Texas, field by the bringing in of a producer, the initial capacity of which was estimated at between 500 and 1,000 barrels a day. This well encountered the pay stratum at a greater depth than any other Sour Lake well, and is said to open entirely new territory. In the Spindle Top field a late completion was reported to be good for 300 barrels a day. The Gulf crude market continues to strengthen, advances of 2c. and 3c. being posted by one of the marketing concerns.

Refined and Products.—The local market has presented rather a quiet and uneventful appearance during the week, the most tangible evidence being offered by our record of clearances for the period, comprising a total of 6,618,340 gallons, of which 2,485,000 gallons were carried in bulk, against 10,399,030 gallons as the former aggregate. There has been little inquiry for forward shipment, and the only engagement reported during the week was one of 170,000 cases for Australia, June—July shipment from New York. Domestic trading has been reported moderate, the advance of the season tending to curtail operations. There have been no new features affecting values, and the market is apparently steady at lately-prevailing quotations. The principal development in the local market for the products during the week has been the reduction in the jobbing schedule of varnish makers' and painters' naphtha to 11c. and 86 degrees gasoline to 21¾c. The changes were without comment, but they were believed to have been induced by the accumulation of supplies consequent upon a limited outlet. Auto naphtha, however, is reported in steady request, the season being favourable for a free gas-engine consumption. Clearances of naphtha for the week comprised 285,910 gallons, against 737,100 gallons for the previous week.

CLOSING QUOTATIONS.

Crude at the Wells.

The quotations for oil represented by credit balances were :—

	Week ended April 10. 1908.	April 10, 1909.
Pennsylvania	$1·78	$1·78
Tiona	1·78	1·78
North Lima	1·04	1·04
South Lima	0·99	0·99
Indiana	0·99	0·99
Illinois, heavy, below 30 deg. ..	0·60	0 60
Kansas and Indian Ter., 32 deg. and above	0·41	0·41
Heavy	0·28	0·28
Humble, Tex.	0·68	0·50
Saratoga	0·66	0·53
Sour Lake, Tex.	0·68	0·53
Jennings, La.	0·67	0·54
Santa Maria	—	1 00
Coalinga	—	0·60
Canadian Oil :—		
Petrolia	1·34	1·44
Oil Springs, less pipeage	1·41	1·51

Refined—For Export.

In cents.	Week ended April 10. S.W. 110 test.	W.W. 150 test.
Barrels, cargo .. .. per gal.	8·50	@10·00
Philadelphia	8·45	@ 9·95
Bulk, New York	5·00	@ 6·50
Bulk, Philadelphia	4·95	@ 6·45
Cases, New York	10·90	@12·40
Cases Philadelphia	10 85	@12·35

Refined in Cases—110 Fire Test.

	Week ended April 3. 1909.	April 10. 1909.
3,000 to 10,000	11·05	11·05
1,000 to 3,000	11·10	11·10

Refined—Jobbing Lots.

In barrels, pkgs. included.

	Week ended April 3.	April 10.
130 fire test, S.W.	11¾	11¾
150 fire test, W.W.	12¼	12¼
In bulk from tanks	9	9
300 fire test	13¼@13¾	13@13¾

Naphtha and Gasolene.

	Week ended April 3	April 10.
Naphtha, V. M. and P. deod. ..	11¾	11
Gasolene, 86 deg.	22¾	21¾

Pennsylvanian Oil Runs from April 1st to April 6th were :—April 1st, 86,840; April 2nd and 3rd, 220,098*; April 4th, 201,350*; April 5th, 45,423; and April 6th, 205,857*.

* Includes Illinois Oil.

The Deliveries of Pennsylvanian Oil from April 2nd to April 7th were:—April 2nd, 180,264; April 3rd and 4th, 339,616*; April 5th, 193,792*; April 6th, 202,196; April 7th, 168,093.

* Includes Illinois Oil.

Clearances for the Week.

During the week ended April 9th and since Jan. 1, the clearances of petroleum, in gallons, from the port of New York, were as follows :—

	Week.	Year.	1908.
Refined	6,618,340	147,205,440	162,706,160
Crude	2,315,450	10,119,475	3,313,625
Naphtha	285.910	7,307,130	1,569,990
Residuum ..	—	108,220	598,900

Export Statistics.

The total exports from the port of New York and from the United States have been :—

	Gallons.
From New York, week ended April 9th ..	11,139,903
Total from New York, from Jan. 1st, 1909 ..	206,394,395
Same period last year	220,255,172
Decrease	13 860,777
From United States, week ended April 9th	32,136,523
Total from United States, since Jan. 1st, 1909	360,640,302
Same period last year	404,765,822
Decrease	44,125,520

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The "Review" Shipping List.

April 23, 1909

(The following abbreviations are used in this table:— L. Left; P. Passed; Arr. Arrived; Sp. Spoken; Tr. Trading.)
Anglo-American Co.'s vessels marked thus (□): the Anglo-Saxon Co.'s tankers thus (*): and Messrs. Lane and Macandrew's thus (†).

Vessel.	From.	For.	Latest Date and Position.
ALCHYMIST	Algiers	Bilbao	Arr. April 17, in Port, April 19
ALICE ET ISABELLE (Fr. bq.)	—	—	In Port Rouen, April 5, laid up
AMERICAN	Antwerp	Tyne	Arr. April 9
APPALACHEE □	Bombay	Singapore	L. April 9
APSCHERON	Thameshaven	Tyne	Arr. April 18
ARAL	—	—	In Tyne, laid up
ARAS	Blyth	Batoum	P. Sagres, April 15
ASHTABULA □	San Pedro	Shanghai	S. Shanghai, Mar. 23
ASTRAKHAN	Philadelphia	Copenhagen	Arr. April 17, in Port, April 19
AUGUSTA	Philadelphia	London	P. Del. Break., April 7
AUGUST KORFF	Philadelphia & Avonmouth	Manchester	Arr. April 19, in Port, April 21
AUREOLE	Port Arthur (Texas)	Antwerp	L. April 16
BAKU STANDARD	Ely Harbour	Cardiff	Arr. Jan. 24, in Port, April 20
BALAKANI†	Sunderland	Philadelphia	P. Dover, April 12
BATOUM	Thameshaven	Tyne	Arr. Mar. 26, in Port, April 20
BAYONNE	Philadelphia	Algiers & St. Louis (Rhone)	P. Sagres, April 18
BEACON LIGHT	Penarth	Kustendje	Arr. April 19
BLOOMFIELD	Port Arthur (Texas)	Manchester	Sd. Norfolk (Va.), April 15
BORJOM	Batoum	Alexandria	Sd. Constant'ple, April 7
BRILLIANT	Tyne	Philadelphia	P. Dunnet Head, April 20
BROADMAYNE	Tongsberg	Tyne	Arr. Feb. 13, in Port, April 20
BULLMOUTH*	Calcutta	Rangoon	L. April 19
BULYSSES*	Balekpappan	Singapore	Arr. April 18
BURGERMEISTER PETERSEN	Philadelphia	Oxelosund	P. Del. Break., April 9
BUYO MARU	Yokohama	Uraga	L. Feb. 14
CADILLAC	Dublin	Philadelphia	Arr. April 14
CALCUTTA (B. b.) □	San Francisco	Shanghai	L. April 8
CAPTAIN A. F. LUCAS (with S.O. Barge 95)	Jacksonviile	New York	Arr. April 9, in Port, April 10
CARDIUM*	Soesoe	Singapore	Arr. April 19
CARPATHIAN†	Port Arthur	Rotterdam	L. April 15
CAUCASIAN†	Newport N'ws	London	L. April 21
CHARLOIS	Antwerp	Philadelphia	P. Scilly, April 11
CHESAPEAKE □	Sabang	—	At Las Palmas, April 21
CHESTER	Kustendje	Antwerp	Sd. Constant'ple, April 16, in tow
CHEYENNE	New York	Savona	Arr. April 17
CITY OF EVERETT (with S.O. Barge 94)	Philadelphia	New York	Arr. April 9, in Port, April 10
CIUDAD DE REUS	Barcelona	New York	P. Tarifa, April 14
CLAM*	Saitozaki	Singapore	Arr. April 12
CONCH	Kustendje	Rouen	Arr. April 20
COWRIE*	Yokohama	—	L. April 12
CUYAHOGA □	Tyne	New York	P. Dunnet Head, April 19
CYMBELINE	Portland	Penarth	Arr. April 17, in Port, April 25
CZAR NICOLAI II.	Hamburg	Batoum	Arr. April 16
DAGHESTAN	Batoum	Antwerp	L. April 20
DAKOTAH □	Shanghai	San Francisco	Arr. April 17
DANUBIAN	Tyne	Port Arthur	P. Dunnet Head, April 5
DELAWARE □	Manchester	Philadelphia	Arr. April 21
DERBENT	Philadelphia	Antwerp	P. Prawle Pt., April 22
DEUTSCHLAND	New York	Hamburg	Arr. Feb. 27, in Port, April 18
DIAMANT	New York	Hamburg	Arr. April 18
EDWARD DAWSON	Liverpool	Hull	Arr. April 9
ELAX*	Balekpappan	Bombay	L. April 15

Vessel	From	For.	Latest Date and Position.
ELISE MARIE	Hamburg	Philadelphia	Arr. April 21
EL LOBO	Campana	Payta	Arr. Mar. 8
ENERGIE	Philadelphia	Flushing	P. Del. Break., April 7
ERIVAN	Manchester	Batoum	Arr. April 19
ETELKA	Rouen	Batoum	S. Constant'ple, April 12
EUPLECTELA*	—	Taketoyo	Arr. April 15
EXCELSIOR	New York	Copenhagen & Hamburg	L. April 17
FRANCE MARIE (French bq.)	Cette	New York	P. Tarifa, Mar. 16
GEESTEMUNDE	New York	Nordenhamn	L. April 8
GENESSE □	Sunderland	New Orleans	P. Sand Key, April 21
GEORGIAN PRINCE	Rouen	Tyne	Arr. April 1, in Port, April 20
GOLDMOUTH*	Samboe	Channel	Sd. Sabang, April 10
GUTHEIL	Boston	Havana	L. April 14
HAINAUT (Du. sh.)	Antwerp	New York	P. Prawle Pt., April 1
HARRY WADSWORTH	Sabine and Norfolk (Va.)	London	P. Virginia Capes, April 8
HELIOS	Rouen	Philadephia	At New York, April 10
HERMIONE	Rotterdam	Cardiff	Arr. Mar. 22, in Port, April 20
HESPERUS	Rotterdam	New York	Arr. April 13
HOTHAM NEWTON	London	Tees	Arr. April 10, in Port, April 19
HYRCANIA	London	Tyne	Arr. April 17, in Port, April 20
IOANNIS COUTZIS	Cardiff	Piræus	Arr. Mar. 3, in Port, April 17
IROQUOIS □ (towing barge Navahoe)	London	New York	Arr. April 14
J. B. AUG. KESSLER	New York	Kurrachee & Bombay	Sd. Suez, April 8
JAMES BRAND	Baltimore	Dublin	Sp. April 17, 45 N., 38 W.
JOYO MARU	Avonmouth	Cardiff	L. April 21
JULES HENRI (French bq.)	Cette	Marseilles	Arr. Mar. 26, in Port, April 20
KURA	Newport	Port Arthur (Texas)	L. April 3
LA CAMPINE	Philadelphia	Antwerp	P. Del. Break., April 7
LA FLANDRE	Tyne	Philadelphia	Arr. April 16
LA HESBAYE	Antwerp	Batoum	S. Constant'ple, April 11
LACKAWANNA □	Aroe Bay	—	At Suez, April 21/22
LANSING	San Francisco	Ancon	L. Mar. 26
LE COQ†	Havre	Novorossisk	Arr. April 20
LOUTSCH	Calais	Tyne	Arr. April 2, in Port, April 20
LUCERNA	Novorossisk	Brunsbuttel	L. April 19
LUCIGEN	—	—	In Tyne, April 20, ld. up
LUCILINE†	New York	Dunkirk	Arr. April 20
LUMEN	Oporto	Tyne	Arr. April 12, in Port, April 20
LUTETIAN†	Pera	Havre and Rouen	L. April 17
LUX†	Rouen	New York	P. Prawle Pt., April 10
MAKKAVEI	—	—	In Port Odessa, April 5
MANHATTAN	Genoa	Batoum	S. Messina, April 18
MANNHEIM	Philadelphia	Bergen	P. Del. Break., April 1
MARGARETHA	Hull	Kustendje	In Downs, April 4
METEOR	Batoum	Vladivostock	At Singapore, abt. Mar. 24
MEXICAN PRINCE	—	—	In Tees, April 19, laid up
MINA BREA	—	—	Lnchd. Greenock, Mar. 10
MINHLA	Tyne	Rangoon	At Port Said, April 11/12

Vessel.	From.	For.	Latest Date and Position
MIRA	—	—	In Port Blyth, laid up
MUREX*	Karatzu	Singapore	Arr. April 17
NARRAGANSETT	New York	London	L. April 13
NEW YORK□	New York	Rotterdam	L. April 13
NIAGARA	Taku	San Francisco	L. April 4
OBERON	Port Arthur (Texas)	Portland	L. April 19
OCEAN	Antwerp	Philadelphia	At New York, April 20
OILFIELD	Tyne	Port Arthur (Texas)	Arr. April 18
OKLAHOMA	Port Arthur (Texas)	New York	P. Sand Key, April 7
ORIFLAMME†	New York	Rouen	L. April 18
OTTAWA□	Hull	Philadelphia	P. Lizard, April 17
OURAL	Batoum	Barcelona	L. April 18
PATELLA	—	—	Lnchd. Wallsend, Mar. 11
PAUL PAIX	New York	Rouen	Arr. April 17
PAULA	Philadelphia	Swinemunde	P. Dunnet Head, April 18
PECTAN*	London	Tyne	Arr. April 21
PENNOIL	Tyne	Philadelphia	L. April 21
PETROLEINE	Cette	Philadelphia	Arr. April 17
PHOEBUS	Hamburg	New York	Sd. Tyne, April 9
PINNA†	Payta	Yokohama	Arr. April 5
POTOMAC□	New York & Trinidad	Buenos Ayres	Arr. April 13
PROGRESSO ARGENTINA (Ar. bq.)	Port Arthur (Texas)	Campana	Sp. Feb. 5 off Fowey Rks., Flda.
PROMETHEUS	New York	Flushing	P. Dungeness, April 19
PRUDENTIA	Port Arthur (Texas)	Liverpool	L. April 12
PURELIGHT	Hamburg	Philadelphia	Arr. April 19
QUEVILLY (Fr. bq.)	Rouen	New York	Arr. April 13
RENDOVA (Br. bq.)	Seville	New York	?Sp. Mar. 31, 27 N., 20 W.
RION	Barry	Batoum	L. April 17
ROCK LIGHT†	Newport News	London	P. St. Catherine Pt., April 22
ROMANY*	Shanghai	Balekpappan	L. April 12
ROTTERDAM	New York	Amsterdam	Sp. April 18, 30 W., 47 N.
ROUMANIAN†	Newp't News	Kustendje	P. Dover, April 20
RUSSIAN PRINCE	Cienfuegos	London	At Thameshaven, April 19
SALAHADJI	Singapore	Balekpappan	L. April 3
SAN CRISTOBAL	Port Arthur (Texas)	Liverpool	Arr. Feb. 12, in Port, April 21
SAN IGNACIO DE LOYOLA (Sp. bq.)	New York	Pasages	L. April 8
SANTA MARIA	Taltal	Port Harford	L. Feb. 21
SANTA RITA	San Francisco	Portland (O.)	L. Mar. 27
SARANAC□	Tyne	Philadelphia	Arr. April 16
SAXOLEINE	Philadelphia	Bordeaux	L. April 15
SCHUYLKILL	Cebu	Boston & New York	S. Sabang, April 8
SEMINOLE□	San Francisco	Moji	L. Mar. 26
SERVIAN†	Manchester	Port Arthur (Texas)	P. Fastnet, April 17
SNOWFLAKE	Cuba	Flushing	Arr. April 14
SOYO MARU	Lobitos	Yokohama	S. Honolulu, Mar. 6
SPONDILUS*	Thameshaven	Cardiff	Arr. April 15, in Port, April 20
STANDARD	New York & Bremerhaven	Hamburg	Arr. April 15, in Port, April 18
STROMBUS*	Sabang	Europe	S. Port Natal, April 20
SULTAN VAN LANGKAT	Freshwater	Sydney	Arr. abt. April 6
SUN	Sabine	Philadelphia	Arr. Mar. 27
SUNLIGHT (Br. bq.)	Port Arthur (Texas)	Foynes	Arr. April 13
SURAM	Hamburg	Blyth	Arr. April 11, in Port, April 20
SUWANEE□	Rouen	London	Arr. April 21
SVIET	Rouen & Plymouth	Batoum	S. Algiers, April 10
TAMARC□	London	Philadelphia	Arr. April 16
TELENA*	Philadelphia	Calcutta	P. Perim, April 13
TEREK†	Venice	Kustendje	L. April 18
TEXAS	Port Arthur (Texas)	Philadelphia	L. Mar. 18
TIFLIS	Rouen	Swansea & Batoum	L. April 20
TIOGA□	Grangemouth	Perth Amboy	Arr. April 17
TONAWANDA□	Hong Kong	San Francisco	S. Kobe, Mar. 31
TRINCULO	Cardiff	Port Arthur	P. Barry Island, April 6
TROCAS	Freshwater	Bombay	Arr. April 13
TUSCARORA	Sabang	U.K. or Cont.	At Port Natal, abt. April 16
VEDRA	Singapore	Channel	P. Port Said, April 14
VILLE DE DIEPPE (Nor. bq.)	Rouen	Philadelphia	Arr. April 17
VOLUTE	Tientsin	Palembang	L. April 7
WASHINGTON	Singapore	Europe	L. April 8
WASHTENAW	San Francisco	Ancon	L. Mar. 17
WEEHAWKEN	Kurrachee & Rotterdam	Barrow	Arr. April 17
WILLKOMMEN	Rotterdam	New York	L. April 17
WINNEBAGO	San Francisco	Moji	L. April 6

Latest Market Intelligence.

LONDON OIL MARKET.

Supplied by Messrs. Benjamin & Gee, 31, St. Mary Axe, E.C.

April 23rd, 1909.

Refined Petroleum remains unaltered in price as follows:—Russian, 6¼d.; American, 6⅞d.; Water White, 7⅞d.; Roumanian, 7d.

LUBRICATING OILS

Are unchanged, the latest quotations being:—

American pale, £6 10s. to £10 10s.
American dark cylinder, from £8.
American filtered cylinder, from £11 5s.
No. 1 Russian, for Spot, £8 7s. 6d.

TURPENTINE.

Turpentine has been fluctuating considerable during the last fortnight and reached for Spot at one time as high as 27/6 but is down to 26/6, which shews a slight rise since our last report, for May/June 26/9 is accepted and July/December, 27/3 to 27/6.

LIVERPOOL OIL MARKET.

April 21st.

Refined oils are quiet, and sellers quote 6¾d., for Russian, Galician or Roumanian; and 7¼d. to 8¼d. per gallon for American.

Petroleum Spirit continues at 1s. 0d. to 1s. 1½d. per gallon for American deodorised, according to quality on the spot.

LATEST AMERICAN PRICES.

New York, April 21st.

Refined, in cases, is steady at 10·90; Standard White, 8·50; Credit balances, 1·78c.

Philadelphia, April 21st.

Standard White is now quoted at 8·45.

RUSSIA. Baku, April 18th.

The Baku oil market is firm. Crude oil, spot, 22 copecs per pood. Residuals, 22⅛ copecs. Kerosene, in ships, 31 copecs.

BELGIUM.

Antwerp, April 18th.

The petroleum market is firm. Price of Standard White, spot, 22 francs per 100 kilos.

FRANCE. Paris, April 16th.

Illuminating oil is quoted in bulk, in whole tank waggons, 23·50 francs per hectolitre; spirit, 33·75 francs per hectolitre. Special white oil, in barrels or cans, 31·50 francs per hectolitre.

GERMANY.

Hamburg, April 16th.

The kerosene market is firm. The price of American Standard White is 7·35 marks per 50 kilos.; Roumanian and Galician, 7·15 marks.

HOLLAND.

Amsterdam, April 16th.

The petroleum market remains firm. American Standard White, spot, 12·20 florins per 100 kilos.

ROUMANIA. April 16th.

	Francs.
Crude oil from different fields, including pipe line charges, per 100 kgs.	4·50–4·70
Refined oil, exclusive of taxes, ex. refinery	8·70
Residuals in tank waggons, at refinery	4·35
Paraffin	130·00

Prices for Export.

Refined oil, f.o.b., per 100 kgs.	7·25–7·75
Benzine, sp. gr. 0·710–0·715, f.o.b.	18·00
,, sp. gr. 0·715–0·720 ,,	15·50
,, sp. gr. 0·730–0·740 ,,	11·00
,, sp. gr. 0·745–0.755 ,,	10·00

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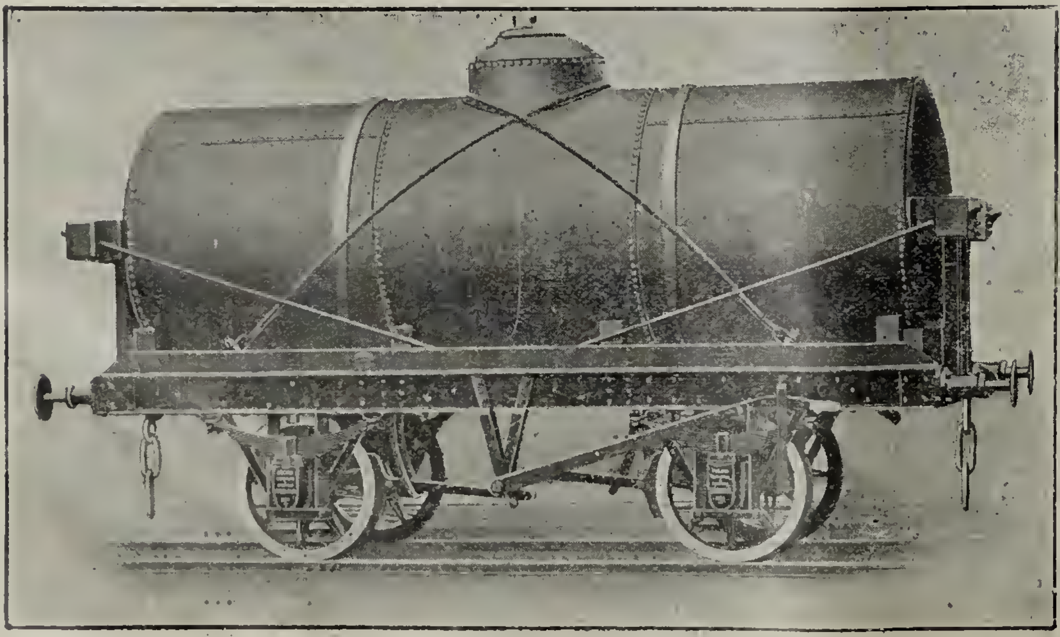
IMPORTS of PETROLEUM into UNITED KINGDOM

Specially prepared for this Journal by the Custom House.

FOR THE SEVEN DAYS ENDED APRIL 12TH, 1909—

Date.	Port and Importers.	Description.	No. of Gals.	Port Whence.
April	London—			
5	A. Brown and Co.	Lub.	4,000	Hamburg
5	Schlieman's Oil Works ..	,,	5,000	,,
5	,, ..	,,	2,600	Philadel.
5	Page, Son and East ..	Lub. Oil and Gr.	610	Antwerp
5	Wilkins, Campbell and Co.	Lub. Gr.	80	,,
5	Mordaunt Bros.	Lub.	5,000	Philadel.
5	Lub. and Fuel Oils Co. ..	,,	2,460	,,
5	Ragosine and Co.	,,	2,400	,,
5	,, ..	Lamp	2,510	,,
5	Mercantile Lighterage Co...	Lub.	120	New York
5	Produce Brokers' Co. (Hotham Newton)	,,	801,520	Batoum
5	J. Harrison	Lub.Gr.	750	Antwerp
6	Anglo-American Oil Co. ..	Lub.	62,800	Philadel.
6	Scott's Wharf	,,	5,000	New York
6	Produce Brokers	,,	20,000	,,
6	Port of London Authority..	,,	1,080	Hamburg
6	A. Brown and Co.	,,	2,400	Philadel.
6	Mercantile Lighterage Co ..	,,	11,800	,,
7	Homelight Oil Co. (Hyrcania)	Lamp	1,114,520	Batoum
7	British Pet. Co. ,, ..	,,	738,000	,,
7	Asiatic Petroleum Co. (Spondilus)	Benzine	768,700	Rotterdam
7	,, ,,	,,	1,076,710	Pulo Samboe
7	Anglo-American Oil Co. ..	Lub.	3,000	New York
7	Mordaunt Bros.	,,	16,700	,,
7	,, ...	,,	6,900	Philadel.
7	Anglo-American Oil Co. (Pectan)	Gas	2,435,210	Sabine
7	Port of London Authority ..	Lub. Gr	640	New York
7	Mercantile Lighterage Co.	Lub.	1,500	,,
7	British and Foreign Wharf .	,,	1,600	Antwerp
8	Page, Son and East ..	,,	960	,,
8	General Steam Nav. Co. ..	,,	480	,,
8	F. Claydon and Co. ..	Lub. Gr.	1,600	Philadel.
8	Langley, Smith and Co. ..	Lub.	2,000	,,
8	F. Cheeseman and Co. ..	,,	2,600	,,
8	Mordaunt Bros.	,,	1,250	,,
10	White and Powell	,,	2,720	,,
10	Lub. and Fuel Oils Co. (Apscheron)	,,	540,230	Batoum
10	,, ,,	,,	12,500	,,
10	Argo Steamship Co. ..	,,	300	Bremen
	Liverpool—			
5	Pickford's, Ltd.	,,	220	Antwerp
5	Vacuum Oil Co.	,,	24,250	New York
5	D. Owen and Sons	,,	3,600	,,
5	Valvoline Oil Co.	,,	16,000	,,
5	Pickford's	Lub. Oil and Paste	200	Hamburg
6	J. Light and Son	Lub.	4,000	New York
6	W. B. Dick and Co. ..	,,	24,700	,,
6	E. H. Kellogg and Co. ..	Lub.	2,000	New York
6	Meade-King, Robinson & Co.	,,	5,000	,,
6	Midland Railway	,,	1,030	,,
6	Meade-King, Robinson & Co. (Erivan)	,,	10,330	Batoum
6	Buttapat Dairy Co,.. ..	,,	230	Antwerp
7	Vacuum Oil Co.	Lub. Gr.	330	New York
7	Liverpool Storage Co. ..	Lub.	800	,,
7	Ismay, Imrie and Co. ..	,,	1,000	,,
8	W. H. Samuel and Co. ..	,,	1,100	,,
8	Burnaby and Chantrell ..	L.Comp.	1,240	,,
8	W. J. and F. Meacock ..	Lub.Gr.	2,480	,,
8	D Currie and Co.	Lub.	40	Hamburg
8	Burnaby and Chantrell ..	L.Comp.	340	,,
	Barrow—			
10/3	(A.R.) J. Little and Co. (Oberon)	Fuel	7,490	Pt. Arthur
	Bristol—			
5	H. Pritchard and Co. ..	Lamp	2,100	New York
5	J. and R. Bush	Lub	40,200	,,
5	Anglo-American Oil Co. (Ottawa)	Resid.Gas	554,340	Philadel.
5	Pickfords	Lub. Oil and Paste	250	Hamburg
8	,, ...	Lub. Oil and Paste	410	,,
8	J. Hare and Co.	Lub. Gr.	40	,,
8	First Anglo-Russian Oil Co.	,,	510	,,
10	British Pet. Co. (Rion) ..	Lamp	567,000	Philadel.
10	,, ,,	Gas	251,000	,,
	Cardiff—			
5	Bristol Steam Nav. Co. ..	Lub.	480	Antwerp
5	,, ...	,,	600	,,
	Goole—			
5	Goole Steamship Co. ..	,,	140	Hamburg
	Grimsby—			
5	J. Sutcliffe and Son	,,	240	Antwerp
	Harwich—			
7	D. Howard	,,	60	,,
	Hull—			
5	W. Gilyott and Co... ..	,,	68,640	New York
5	Wilsons and N.E. Co. ..	,,	880	Antwerp
6	,, ...	,,	520	Hamburg
8	,, ...	,,	1,360	,,
8	,, ...	,,	1,760	Antwerp
8	T. Meredith, Roberts and Co.	,,	400	,,
8	T. Wilson, Sons and Co. ..	,,	240	Bergen
	Manchester—			
5	Bramwell, Fern and Co. ..	,,	2,140	New York
5	Liverpool Storage Co. ..	,,	25,080	,,
5	G. B. Taylor..	,,	151,520	,,
8	Worthington and Boler ..	,,	5,310	Philadel.
10	Manchester Liners, Ltd. ..	,,	3,400	,,
10	British Pet. Co. (Servian) ..	Lamp	1,765,000	Pt. Arthur



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"GRIP" Soldering Fluid.
No corrosive fumes given off. Prevents
rust at the joints and consequent leakage.
Stronger work. Less solder required.

IMPORTS.—(*Concluded*).

Date.	Port and Importer.	Description.	No. of Galls.	Port Whence.
April	Newcastle—			
7	Tyne-Tees S.S. Co...	Lub.	200	Rotterdam
	Sunderland—			
5	Anglo-American Oil Co. (Balakani)	Lamp	1,368,990	Sabine
	Swansea—			
5	Richards, Turpin, and Co.	Lub.	3,400	New York
5	,,	Resid.	1,000	,,
	Aberdeen—			
10	R. Connon, Reid and Co.	Lamp	4,000	Hamburg
	Dundee—			
8	D. Alexander and Sons	Lub.	400	,,
	Glasgow—			
7	Burrell and Son	L.Resid.	4,000	Trieste
8	J. and P. Hutchison	Lub.	200	Rouen
10	J. and A. Allan	M. Colza	3,360	Philadel.
10	,,	L.Resid.	2,360	,,
10	,,	Lub. Gr.	420	,,
10	,,	Lub.	71,110	,,
	Grangemouth—			
5	W. Graham-Yooll and Co...	Lamp	3,120	Hamburg
5	J. Currie and Co.	Lub.	120	,,
7	,,	,,	480	,,
	Leith—			
5	J. Currie and Co.	,,	120	Bremen
6	,,	,,	2,920	Hamburg
6	W. Graham-Yooll and Co...	Lamp	3,360	,,
6	G. Gibson and Co.	Lub.	700	Antwerp
8	,,	,,	2,440	,,
8	J. Currie and Co.	,,	2,400	Hamburg
	Belfast—			
7	J. C. Pinkerton and Co.	Lub. Oil and Gr.	150	,,
10	G. Heyn and Sons	Lub.	1,050	Reval
	Deduct to Correct—			
	Manchester—		12,684,550	
29/1	Anglo-American Oil Co. (Delaware)	Lamp	31,110	Philadel.
13/3	British Pet. Co. (Oberon)	Fuel	25,860	Pt. Arthur
	Total for the Seven Days		12,627,580	

FOR THE WEEK ENDED 19TH APRIL, 1909—

Date.	Port and Importers.	Description.	No. of Galls.	Port Whence.
April	London—			
13	Anglo-American Oil Co.	Lub.	4,000	Philadel.
13	Port of London Authority	,,	5,600	New York
13	Mordaunt Bros.	,,	2,800	Baltimore
13	,, ,,	,,	4,200	New York
13	Van Dam and Co.	Tar Oil	590	Rotterdam
13	T. H. Lee	Lub. Oil and Gr.	860	Hamburg
14	Port of London Authority	Lub.	800	New York
14	Produce Brokers' Co.	,,	2,400	,,
15	Fielder, Hickman and Co...	,,	20,480	,,
15	,, ,,	Lub. Gr.	1,240	,,
15	Page, Son and East	Lub. Oil and Gr.	800	Antwerp
15	T. H. Lee	Lub. Gr.	110	Hamburg
16	Mercantile Lighting Co,	Lub.	17,100	New York
16	T. H. Lee	Lub. Gr.	40	Hamburg
16	British and Foreign Wharf..	Lub.	820	Antwerp
16	Neale and Wilkinson	,,	30	New York
17	Van Dam and Co.	Tar Oil	2,500	Rotterdam
19	Bowring Petroleum Co.	Lub.	3,240	Lisbon
19	J. Harrison, Ltd.	Lub. Gr.	1,200	Antwerp
19	British and Foreign Wharf	,,	1,68	,,
19	Page, Son and East..	Lub. Oil and Gr.	360	,,
19	Argo Steam Ship Co.	Lub.	400	Bremen
	Liverpool—			
13	Pickford's	Lub. Oil and Paste	310	Hamburg
13	J. T. Fletcher and Co.	Lub. Gr.	940	Antwerp
13	G. B. Taylor..	Lub.	39,400	Philadel.
13	Worthington and Boler	,,	4,600	,,
13	Bowring Petroleum Co.	,,	4,120	,,
13	Shropshire Union Railway and Canal Co.	,,	1,860	,,
13	W. B. Dick and Co.	,,	28,750	,,
13	Meade-King, Robinson & Co.	,,	35,200	,,
13	,,	,,	4,480	,,
13	Huxley and Co.	,,	2,320	New York
13	American Express Co.	,,	80	,,
13	W. Gibson and Sons	Lamp	2,050	Boston
14	Crew, Levick and Co.	Lub.	22,860	Philadel.
14	,,	M. Colza	5,270	,,
14	Bramwell, Fern and Co.	Lub.	3,080	,,
14	D. Owen and Son	,,	1,130	,,
14	American Line	,,	1,000	,,
14	S. R. B. Melling and Co.	,,	1,200	New York
14	Shropshire Union Railway and Canal Co.	,,	4,400	,,
14	R. Crooke, Jun.	,,	2,250	,,
14	Ismay, Imrie and Co.	,,	2,400	,,
14	G. B. Taylor	,,	60,160	,,
14	Vacuum Oil Co.	,,	33,400	,,
14	Fellows, Morton & Clayton	,,	1,980	,,
14	C. W. Field	,,	210	Antwerp
14	E. Schliemann's Oil Works	,,	440	Hamburg
15	Meade-King, Robinson & Co.	,,	23,440	Baltimore
15	,,	Lub. Gr.	2,600	,,
15	A. Hopps and Sons	Lub.	2,580	,,
15	Burnaby and Chantrell	L. Comp.	2,690	New York
15	,,	,,	390	,,
15	Vacuum Oil Co.	Lub.	6,000	Fiume
17	Meade-King, Robinson & Co.	Spirit	50,000	Rotterdam
17	W. B. Dick and Co.	Lub.	10,330	Baltimore
19	Liverpool Storage Co.	R. Gas	5,200	N. News
19	Davies, Turner and Co.	Lub.	30	New York
19	Meade-King, Robinson & Co.	,,	240	Hamburg
19	D. Currie and Co.	,,	590	,,
19	Penwarden and Jackson	,,	380	Antwerp
19	C. W. Field and Co.	,,	210	,,
19	C. C. Wakefield and Co.	L. Comp.	440	,,
	Barrow—			
19	Anglo-American Oil Co. (Weehawken)	Benzine	615,180	Kustendje
19	,,	R. Lub.	24,000	,,
	Bristol—			
15	Pickfords	Lub. Oil and Paste	420	Hamburg
15	W. G. Clarke	Lub.	1,280	Antwerp
17	Ford and Canning	,,	15,545	New York
17	H. R. James and Sons	,,	23,780	,,
17	,,	M.Colza	6,000	,,
17	Anglo-American Oil Co. (Aug. Korff.)	Lamp	520,810	Philadel.
17	,, ,,	Lub.	115,250	,,
	Gloucester—			
15	Bristol Steam Nav. Co.	,,	120	Hamburg
	Grimsby—			
13	J. Sutcliffe and Son	,,	240	Antwerp
13	,,	,,	80	Hamburg
17	,,	,,	220	,,
	Harwich—			
13	D. Howard	,,	170	Antwerp
14	,,	,,	30	,,
16	,,	,,	1,200	,,
	Hull—			
16/3	Wilsons and N.E. Co.	Tar Oil	4,570	Hamburg
14	,,	Lub.	1,840	,,
14	,,	Naphtha	1,000	,,
14	,,	Lub.	560	Antwerp
13	Anglo-American Oil Co. (Ottawa)	Gas	415,760	Philadel.
13	T. Wilson, Sons and Co.	Lub.	129,440	New York
15	W. Gilyott and Co.	,,	78,120	,,
15	J. A Scott, Ltd. (Frisia)	Borneo Dis.	100,000	Rotterdam
16	Hull & Netherlands S.S. Co.	Tar Oil	2,880	,,
16	Wilsons and N E. Co.	Lub	460	Hamburg
16	,,	,,	1,120	Antwerp
	Manchester—			
13	B. Fern and Co.	,,	27,740	Philadel.
13	,,	Lamp	750	,,
13	Meade-King, Robinson & Co.	Lub.	15,200	,,
13	,,	M.Colza	2,600	,,
13	D. Currie and Co.	Lub.	360	Hamburg
14	,,	,,	720	,,
14	,,	,,	1,040	,,
14	J. T. Fletcher and Co.	,,	40	Antwerp
14	C. H. Morton and Sons	,,	1,200	Philadel.
14	Manchester Liners	,,	2,600	,,
14	Liverpool Warehousing Co.	,,	119,880	,,
15	Crew, Levick and Co.	,,	3,200	,,
17	G. B. Taylor	,,	74,400	New York
19	B. Fern and Co.	,,	1,020	,,
	Newcastle—			
15	Tyne-Tees Steamship Co.	,,	4,000	Antwerp
19	,,	,,	5,720	,,
15	,,	Lub. Oil and Gr.	450	Hamburg
17	Ragosine and Co	Lub.	1,200	Philadel.
19	Steenberg and Son	,,	18,400	,,
19	Bowring Petroleum Co.	,,	400	,,
19	W. Gilyott and Co...	,,	6,200	,,
19	Crew, Levick and Co.	,,	12,600	,,
	Southampton—			
19	P. E. Curry	,,	210	New York
	Glasgow—			
13	Clyde Shipping Co.	Lub. Oil and Gr.	520	Antwerp
13	Anchor Line	Lub.	58,580	New York
19	,,	,,	35,720	,,
19	,,	M.Colza	2,400	,,
	Grangemouth—			
13	J. Currie and Co.	Lub.	3,800	Hamburg
	Leith—			
13	J. Currie and Co.	Lamp	2,180	,,
13	,,	Lub.	2,820	,,
13	W. Gilyott and Co.	Lamp	2,180	,,
13	G. Gibson and Co.	Lub.	440	Antwerp
19	,,	,,	1,320	,,
15	Henderson and McIntosh	,,	2,000	Philadel.
	Belfast—			
14	J. C. Pinkerton and Co.	,,	130	Hamburg
15	Anglo-American Oil Co. (Potomac)	Lamp	1,307,110	New York
	Total for Week		4,217,560	
	Total for the Period		16,845,140	

The Petroleum Review.

By PAUL DVORKOVITZ.

Vol. XX. *(New Series.)* May 8th, 1909. No. 450

THE PETROLEUM REVIEW:

The ANNUAL SUBSCRIPTION for both English and Foreign readers is 26s., including Postage. Single Copies may be had at the offices at 1s.

The Editor would esteem it a favour if readers, when communicating with the various firms advertising in our pages, would mention the "Review."

Contributions upon items of interest are always welcomed from subscribers, but in each case these should be accompanied with the name and address of the sender, not necessarily for publication.

Editorial Notes.

The Tax on Petrol.

A month ago we foreshadowed the possibility of there being a tax on petrol imported into this country for motor-car purposes, and, much as we regret it, our prophecy has proved correct, for the Chancellor of the Exchequer has seen fit to impose an exorbitant tax upon motor spirit. For our part, we can only repeat what we have said on a former occasion—the imposition of such a tax is bound to stem the tide of progress in the use of motor spirit in this country, and to do incalculable harm to the growing motor industry. While recognising that it was inevitable that Mr. Lloyd George should hunt around for additional sources of revenue, we must frankly confess that a tax of 3d. per gallon upon motor spirit is most unjustifiable—we might almost go so far as to say it is iniquitous. But it is not alone in the mere imposition of the tax that the whole trouble arises. How the collection is to be arranged is a matter which must cause our large petrol importing companies grave concern, since if the spirit has to pass through bond, and the excise duty levied before it is distributed throughout the country, it must be apparent that an enormous amount of additional capital will have to be sunk by the firms to whom we have referred. Exactly how the collection is to be arranged, however, is one of those matters which the near future has in store, and until this is definitely settled—and so far even the excise authorities can give no information upon the subject – the whole trade must be continued in a semi-chaotic state.

Continued Success of the Burmah Oil Company.

The Burmah Oil Co. has lived through another very successful period of its history, for at the seventh annual meeting of shareholders held yesterday at Glasgow, the substantial dividend of thirty per cent. was declared. Thanks to shrewd and careful management, there are very few concerns associated with the oil trade that can shew such wonderful progress as that of the Burmah Oil Co., and with the continuance of exceedingly favourable conditions in the kerosene oil trade of India, there is every reason to believe that the success achieved in the past will be reflected over and over again in the future. The completion of the company's pipe line, some hundreds of miles in length, and a great engineering feat in itself, says much for the enterprise of the gentlemen in charge of the concern who have grasped the opportunity to add to the solidarity of the company's business, while the erection of a new refinery likewise speaks volumes for the foresight which prevails in the inner working of this great concern in the East.

The World's Largest Petroleum Refinery.

The announcement that the recently incorporated Standard Oil Co. of Louisiana is to build a refinery at at Baton Rouge, and to expend the whole of its $5,000,000 capital upon developments associated with the refinery, calls to one's mind the numerous great refineries built by the Standard in other parts of the States, among which are numbered the largest petroleum refineries in the world. The present project, however, is to be upon lines far more titanic than those of its predecessors, for the Baton Rouge Refinery, when completed, will rank as the largest in the world, and will give employment to over 600 men. Up to the present, nothing definite has been said as to the future plans, but it is almost safe to predict that eventually the bulk of the Standard's business in the Mid-Continent fields will be concentrated at Baton Rouge The erection of the refinery there plainly suggests the Standard's faith in the Caddo fields, but it is a foregone conclusion that the trunk line from the Mid-Continental fields will also pour its crude oil into the refinery's tanks, since so gigantic a refinery cannot alone run upon the crude oil from Louisiana and Texas. This, at least, is the strong opinion of Oklahoma operators, who have become jubilant over the possibility of another outlet being found for their gradually extending stocks.

The Petroleum Industry in Balik Pappan.

A few interesting details concerning the petroleum trade of Balik Pappan are given in a recently published British consular report. The writer points out that the principal exports in 1908 were 380,000 tons of petroleum, having a nominal value of £372,865, and upon which the excise duties paid amounted to 2,060 guilders. The following figures shew the details of export as compared with 1906-7:—Liquid fuel, 1906, 148,010 tons; 1907, 174,412 tons; 1908, 177,766 tons. Borneo kerosene, 1906, 106,411; 1907, 131,648; 1908, 141,970. Benzine, 1906, 13,858; 1907, 32,894; 1908, 29,221. Kerosene distillate, 1907, 14,132. Borneo distillate, 1908, 858. Crude petroleum, 1906, 7,691; 1907, 2,846; 1908, 1,817.

The oil industry, the writer points out, is in the hands of the Bataafsche Petroleum Maatschappij, whose headquarters are at the Hague. The port, with its good natural harbour, is growing fast in importance, and is the centre of the Borneo petroleum industry. The paraffin wax plant is now nearly completed, and is expected to be in working order in a few months' time.

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THE STRIKE OF OIL IN EGYPT.

In our last issue we gave details of the recent important strike of oil upon the properties of the Egyptian Oil Trust in Egypt, together with several photographs of portions of the property, and now, thanks to the courtesy of the general manager and the secretary of the Trust, we are in a position to publish two original illustrations taken a few days ago. The first one shews the successful well spouting, while in the second a general view is given of the properties of the company, a glance at which illustration will shew their nearness to that great waterway between Europe and the East.

IMPORTANT CABLE.

A cable was received late yesterday afternoon at the company's offices to the effect that the successful well—Sutherland well No. 1—was increasing in its flow, its present production being one hundred tons daily.

LONDON OIL SHARE MARKET.

Friday, May 7th, 1909.

Movements in the group of Oil Share Prices on the London Stock Exchange have been few and of an unimportant character, changes being a little irregular. Shell Transport Ordinary have improved 6d. per share on balance, at 57s. to 58s., after being a little higher in the interim, and the Preference are $\frac{1}{8}$ better at $10\frac{7}{8}$-$11\frac{1}{8}$, Spies Petroleum are very firm at 11s. 9d. to 12s. 3d., these figures shewing an advance of 9d. per share, and Assam Oil register a rise of 6d. at 17s. to 18s.

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THE TIN PLATE MARKET.

Messrs. Norton, Owen & Co., of 4, Bishopsgate Street Within, London, E.C., report under date May 6th, 1909, as follows:—

The market is quieter, the larger buyers having filled their requirements for the present. There is practically no change in prices, which are steady as under:—

IC	$18\frac{3}{4} \times 14$	124 sheets	110 lbs.	11/10½ to 12/0 per box.
IC	$19\frac{1}{4} \times 14$	120 ,,	110 ,,	11/10½ ,, 12/0 ,,
IC	20×10	225 ,,	156 ,,	16/10½ ,, 17/0 ,,

F.o.b. Wales. Tin lining and iron hooping extra.

◆

PRODUCTION OF ENGLISH COMPANIES IN RUSSIA.

Baku Russian Petroleum Co., Ltd.—The production for the week ended 24th April was 205,650 poods, or 3,315 tons; and for the week ended 1st May was 212,600 poods, or 3,427 tons.

Russian Petroleum and Liquid Fuel Co., Ltd.—The production for the week ended 24th April was 187,000 poods, or 3,015 tons; and for the week ended 1st May was 196,000 poods, or 3,160 tons.

Spies Petroleum Co., Ltd.—The production for the week ended 25th April was 265,830 poods, or 4,288 tons. The total production for year to 25th April was 3,673,185 poods, or about 59,245 tons. The total production for the corresponding period last year was 4,011,905 poods, or about 64,708 tons. The output for the week ended 2nd May was 274,380 poods, or 4,425 tons. The total production for year to 2nd May was 3,947,565 poods, or about 63,670 tons. The total production for the corresponding period last year was 4,291,885 poods, or about 69,224 tons.

The European Petroleum Co., Ltd.—The production for the week ended 25th April was 144,648 poods, or 2,332 tons; and for the week ended 2nd May was 142,284 poods, or 2,294 tons.

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GOLD COAST OIL AND BITUMEN CORPORATION, LIMITED.

A circular bearing the date of May 3rd, has been issued from the offices of the company stating that as the result of negotiations with the Société Francaise de Petrole, Ltd., an agreement has been arrived at under which the Gold Coast Oil and Bitumen Corporation will sell its oil concession and property in the Gold Coast Colony and all its assets including unpaid capital to the latter mentioned company 171,132 one pound shares, or a proportion of five to every four shares.

The Trans-Isthmian Pipe Line.

. . OIL AS FUEL ON THE PANAMA CANAL WORKS. . .

. . By JOHN GEO. LEIGH. . .

In the course of a paper read a few weeks ago before the Manufacturers' Association in Chicago, Lieut.-Colonel Goethals, the chairman and chief engineer of the Isthmian Canal Commission, repeated his assurance that the Panama Canal would be opened for use by the world's commerce not later than January 1st, 1915.

Laying the Pipe Line through a Swamp.

This mighty undertaking, when completed, will claim just recognition as the greatest constructive engineering work ever attempted by man. It will have been also the most costly. In their ill-starred endeavour to solve the problem which for nearly four centuries had agitated far-sighted and imaginative men, the thrifty people of France sacrificed nearly £60,000,000; and to complete the work the United States will require to spend—according to the latest official estimates—not less than £77,360,000. That the latter amount is not larger, will be due, in no small degree, to the considerable and increasing use of oil as fuel in connection with the work of construction.

For the opportunity of effecting this economy, the United States have to thank, in the first instance, the enterprise of the Union Oil Co. of California. This corporation was founded in 1890 by Pennsylvania oil men, who had been established in the business in California since 1882. Its headquarters, until last year, were at Los Angeles, the directors being residents of that city and highly esteemed for probity and conservative business energy. The president, Mr. Lyman Stewart, is well-known as a philanthropist and far-sighted business man, to whom is due the credit of holding the company together and bringing it safely through the rocks and shoals of the early days of the petroleum industry of California and the great panic of 1893.

The company for many years has done a considerable business in the Eastern States in high-grade standardised asphaltum. Until recently, however, its activities in this direction were necessarily restricted by high trans-continental freights or the long voyage around Cape Horn.

Under date of October 30th, 1905, the company obtained from the Republic of Panama a concession for the construction and maintenance of a pipe line across the Isthmus, for the purpose of conveying crude oil, and for the erection of pumping stations and storage tanks in the cities of Panama and Colon. This was followed by a license granted on January 10th, 1906, by Mr. W. H. Taft, then Secretary for War, for the construction and operation of such a line in the canal zone, over lands owned by the United States and Panama Railroad Co. The license is revocable at the will of the Government of the United States, and conditional upon the payment of $500, U.S. currency, a month, beginning August 1st, 1906, into the canal zone treasury, the fund thus created to be set aside for the support of the public schools of the zone. It is further stipulated in the grant that the Isthmian Canal Commission or Panama Canal Co. may purchase crude oil from the licensees at 90 cents a barrel. The Union Oil Co. is subject to the usual canal zone taxes, and for the rights acquired from the Republic of Panama pays $250 a month to the Government of that State.

HOW THE PIPE LINE WAS LAID.

No sooner was the license granted than the Union O Co. took steps to carry out its part of the contract. Prompt action, as a matter of fact, was very necessary, for by the terms of the agreement, six months only

Erecting a Storage Tank along the Route.

were allowed for the completion of the line. The laying of the latter and the construction of the pumping stations were entrusted to Mr. R. W. Fenn, Mem. Am. Soc. C.S., who had been for many years with the company, and, having lived in many of the South American Republics, was accustomed to tropical health conditions and to handling native and West Indian labour. Characteristically American were the circumstances of his appointment. He was given about fifty minutes to get ready for the trip, and reached New York just in time to secure a passage by the steamer leaving for Colon on February 2nd. He took with him neither men nor plans, but was provided with ample funds and, what was perhaps of equal worth, a store of invaluable experience.

The laying of the pipe line was commenced on the Atlantic side on April 16th, subsequently continued at several places simultaneously, and completed on October 16th, six months to a day—the time originally fixed having been extended by the United States Government to allow for preliminary arrangements. The progress of the work, attended as it was by many natural and engineering difficulties and not a few special troubles, was followed locally with great interest, and proved a valuable object lesson to American engineers and others engaged in the construction of the canal.

At that time, Jamaican labour, on which Mr. Fenn almost exclusively relied, was little better than a byword for worthlessness in canal-building circles; nor had the authorities yet solved the subsistence and housing problems. The pipe line followed very closely the route of the Panama Railroad, which was being double tracked and re-laid with heavy American rails. Excavation for the canal was going on everywhere; steam shovels, weighing from 70 to 95 tons, were at work in many places on both sides of the railway, and tracks were being shifted and plans being constantly changed all along the line. There being no waggon road across the Isthmus, it was necessary to be continually on the alert to dodge the heavy dump-train traffic—first, when distributing the pipe, and, later, when moving material. Moreover, the work commenced with the beginning of the rainy season, and was completed before it ended. In one place the men worked in the pouring rain for three weeks, up to their waists in water in a swamp, or on a raft of boards. One section of the line, indeed, owing to the absence of secure bottom, had to be provisionally laid on on a floating raft of logs, nearly a mile long.

"OVERGROWN CHILDREN" AND THEIR TREATMENT.

Mr. S. T. McElfresh, of Pittsburg, Penn., was in immediate charge of the pipe-laying gangs, each of which consisted of about 70 men, divided in sections. First came the "brushers," whose duty it was to cut away the jungle and grass, followed by the "stringers," who laid the pipe in line, end to end. The next division removed the thread-protectors, and painted the threads with a preparation of oil and graphite. The pipe-laying proper consisted of men who handled the lifting jacks, jack-boards and chain-tongs for holding the finished line in place, and 20 men on the pipe-tongs, five to each of four pairs of extra heavy long-handled lay tongs. Another section lifted the next joint with pick-ups, and the pipe-steerer lined it up so that the thread would enter properly. The joint was then twirled by the friction of a length of rope passed around it several times, and drawn to and fro until the pipe would enter into the collar no further without the aid of the tongs.

The foreman then sat astride the collar and beat time with his hammer, while the tongsmen "broke out"—two tongs up and two down, with the precision of military drill. After the joint was in place, the painters put on a second coat of paint, the first having been applied when the pipe left the shops, to prevent rust forming while in transit.

An important feature of the organisation was the employment of a confidental man, whose duty it was to pass from one gang to another with instructions to report any infringement by the foreman of the general orders concerning the treatment of the blacks.

Touching the latter, I cannot do better than quote the words of one who has had large and practical experience of the question, regarding it, consequently, from the standpoint neither of the Negrophobe nor "Rights of Man":—

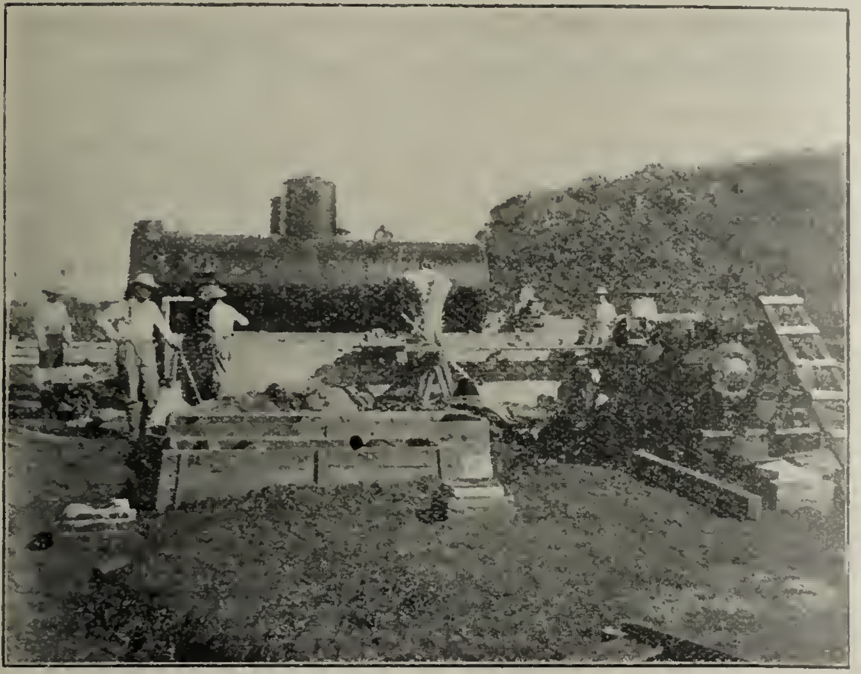
> "Truth to tell, the Jamaicans are simply great overgrown children, easily discouraged by hazing or injustice, and quite as readily heartened by confidence or jollying. However big and well trained a gang may be, it can be scattered in two days by a foreman who has a mean streak in him, and lets it crop out. To be sure that he understands, it is necessary to make each man repeat an order given to him; for the better the man, the more anxious he is to please, to answer, 'Yes, sah,' and start off with but the faintest idea of what is expected of him."

FEATURES OF THE PIPE LINE.

On December 15th, 1906, a dream of centuries was realised in unexpected fashion. Since the discovery of the American mainland by Columbus and that of the Pacific Ocean by Balbao, adventurers without number have sought north and south of the Isthmus of Panama natural aids—rivers or low depressions of the mountain chain—to a union of the waters of Atlantic and Pacific. On the day mentioned, this junction was actually accomplished, not, however, by means of the long discussed canal, but through the then recently completed oil pipe line. For the purpose of testing the latter, water from the Pacific was pumped through it, under a pressure of 800 lbs. to the square inch, and discharged into the Caribbean Sea.

Owing to the re-location of the Panama railroad, necessitated by work on the canal and the submersion of several hundred square miles of territory to form the future Gatun Lake, many changes have already been made in the route of the pipe line, and others are in prospect. All such changes, according to the contract, have to be carried out at the expense of the oil company. The line, roughly speaking, is 48 miles long, the pipes being of open-hearth steel, eight inches in diameter, with gate valves at one mile intervals, and without expansion joints. From sea level to the summit at Culebra the total lift is about 225 feet. At the summit the line skirts the Rio Grande reservoir and is encased in concrete, so that should the pipe break, the water would not be effected.

A Dow compound pump, driven by steam from boilers, in which crude oil is used, furnishes the pressure to pump the oil across the Isthmus—a journey of about thirty hours. The oil is so inelastic that it can be ascertained by the pulsation in the plant at La Boca at what moment the valve of the tank has been closed.



The Pumping Station at the Atlantic Terminal.

As the pipe is laid on the surface of the ground, it follows a somewhat serpentine course, and the many curves help to overcome the expansion due to changes in temperature. The pipe holds about 15,000 barrels of oil.

The oil delivered on the Isthmus comes from Santa Barbara county, California, is piped from the field to Port Harford, and there pumped into the Union Oil Co.'s tank steamers, which serve points in Oregon, Washington, Hawaii, Chile and Guatemala, as well as Panama. There are seven storage tanks in the canal zone, four at La Boca, near the Pacific entrance to the canal, and three at Mount Hope, near Colon. Each tank has a capacity of 37,000 barrels. An eighth tank, of like capacity, formerly situated at Mount Hope, was destroyed by lightning on May 13th, 1908.

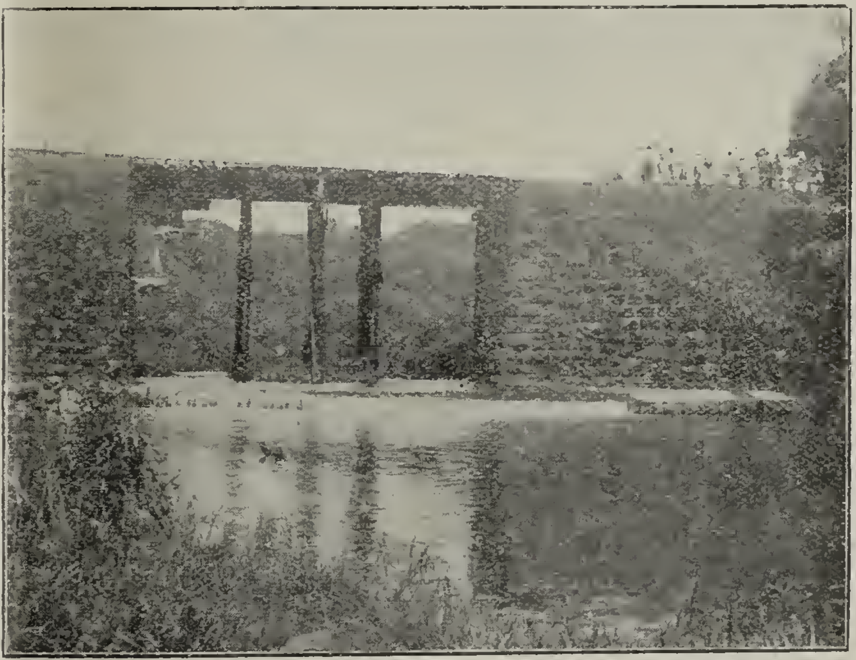
This disaster, only the third of its kind, suffered by the Union Oil Co. during a quarter of a century, occurred the day after workmen had commenced painting the tank. They had placed in the centre of the roof a long steel pin on which to fasten the slings and tackle of the painters' platforms, and this, in all probability, attracted the lightning. While the fire was in progress about 6,000 barrels of oil were pumped from the tank affected into another close at hand, and more would have been saved had not the collapse of the roof stopped up the exit pipe. The fire lasted 14 hours, and resulted in the destruction of about 14,000 barrels of oil. The fire wall, although only partially completed, prevented the burning oil from flowing down the hill; many of the pipes in the yard were, however, burned out, causing a few hours' suspension of the supply of oil to the canal works.

From the Atlantic terminal of the pipe-line—the only one connecting the two oceans, and at the time of its construction the only large line in the tropics—the crude oil is shipped to Philadelphia or New York, where it is refined. The sale of Californian oil in the Eastern markets, in competition with the products of the great corporation which has so long held a monopoly, is already so considerable as to amply justify the enterprise of which it is the outcome.

DELIVERY AND USE IN THE CANAL ZONE.

For the moment, however, interest mainly centres in the important part which oil is playing in the completion of the Panama Canal. Although laid within the allotted period, the Union Company's pipe line across the Isthmus was not used throughout its entire length until November, 1907; and for some time the oil purchases by the Canal Commission amounted only to a few hundred barrels, mainly in connection with its anti-mosquito campaign. Gradually, however, a wiser policy developed, resulting in a widespread supercession of coal as a fuel for stationary and other boilers.

The economy effected has been very considerable. During the year ended June 30th, 1908, the Commission purchased, at $6·35 per ton, 31,292 tons of coal for use in the boilers now supplied with crude oil. By this substitution – on the basis that a barrel of oil, at 90 cents, generates as much steam as a quarter ton of coal—the saving from a fuel point alone is 56 per cent., to which may be added 10 per cent. on account of reduced fixed expenses, firemen's wages, etc. At present, the approximate amount of oil used per month at the different canal plants is :—



Laying the Last Joint at Haut Obispo.

	Barrels.
Floating equipment at the Pacific entrance, dredges, tugs, etc.	2,500
Cristobel machine shops	650
Cristobal ice plant	3,900
Mount Hope pumping station	280
Gatun pumping station	600
Tabernilla pumping station	450
Gorgona pumping station	600
Gorgona machine shops	3,000
Las Cascadas air compressor plant	1,800
Empire pumping station	200
Empire machine shops	7,000
Rio Grande air compressor plant..	1,800
Ancon pumping station	1,100
La Boca ship yards and dredging equipment ..	3,200
La Boca electric light plant	1,300
Total	28,380

The cost to the Canal Commission for this quantity of oil per month is $25,542, as compared with $45,053, the cost of the coal which would have been required to generate an equivalent amount of steam.

The supply tanks are connected with the oil company's pipe line by four-inch pipes, and contain, as a general rule, about a month's supply. The oil is fed by gravity to the furnaces under the boilers, and atomised by coming into contact with jets of steam at the mouth of the burners. The latter are of various types—one made by the W. N. Best Co., another designed by a department of the Canal Commission, and others modified Booth and Warren burners. Due care has been taken for the protection of the property in the neighbourhood of the tanks. In the event of accident, a drain will carry all oil away from the power plant and adjacent houses; each tank is provided with a steel roof as protection against sparks and cinders, and with vent pipes, the outlets of which are covered with wire gauze, so that accumulated gases, if ignited, can pass off without danger of a flash passing back into the tank.

Twelve locomotives equipped with oil tanks and oil-burning apparatus are already in service on the Panama Railroad, and an early use of oil as fuel in the locomotives at work on the Canal is not improbable.

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TRIAL TRIP OF THE SS. "PATELLA."

This vessel, which was recently launched from the yard of Messrs. Swan, Hunter and Wigham Richardson, Ltd., was taken for oil fuel trial at sea, on April 28th, when a speed of 11¾ knots was attained.

The vessel has been constructed to the order of Messrs. The Anglo-Saxon Petroleum Co., Ltd., of 20, Billiter Street, E.C., under the superintendence of their marine department, and has been built for the petroleum trades, specially with a view to carrying various kinds of oil in one cargo, being similar to the ss. "Conch," recently completed by the same builders. She has the highest class at Lloyd's, and her dimensions are as follows:—418 feet over all, 51 feet 3 inches extreme breadth and 31 feet moulded depth and carries 7,700 tons of deadweight on a moderate draught.

The engines have been supplied by Messrs. The Wallsend Slipway and Engineering Co., Ltd., of Wallsend-on-Tyne, and have cylinders 26½ inches, 43 inches and 72 inches by 48-inch stroke, taking steam from three single-ended boilers, working at a pressure of 180 lbs. per square inch. The vessel has pump rooms and is fitted with electric light and winch gear for quick and efficiently handling the cargo. The Meyer's system for burning liquid fuel has been installed.

The tanker underwent her coal trials on Thursday last, and then proceeded to Port Arthur to load her first cargo.

◆

LAUNCH OF THE "CONRAD MOHR."

A new oil tanker, the "Conrad Mohr," built at the yards of Messrs. Craggs and Sons, Middlesbrough, was recently launched. The vessel has been built to the order of Messrs. Michelsen and Co., Bergen, Norway, and is the second oil boat built upon the "Isherwood" system of construction by this firm, and is the fourth ocean-going steamer built upon the new system. The vessel is sub-divided in order to form 14 separate oil tanks, and is fitted with two steel decks, with a continuous expansion trunkway in the 'tween decks, is built to take the highest class with Lloyd's Register and Det Norske Veritas, and is designed to carry 6,150 tons deadweight. There are two complete cargo pumping installations of unusual power, designed to deliver the cargo into shore tanks in the course of a few hours. Accommodation for ship's company is very commodious and complete in every respect. The machinery, which is to be fitted aft in the vessel, will be supplied by the North-Eastern Marine Engineering Co., Wallsend-on-Tyne, and will have cylinders 25, 41 and 67-inches by 45-inch stroke, steam being supplied by the three large single-ended boilers working at 180 lbs. pressure to the square inch.

◆

YOKOHAMA PETROLEUM IMPORTS.

During February the imports of petroleum and its products into Yokohama amounted to 373,464 gallons, and were valued at 74,693 yen, as compared with an import of 817,160 gallons for January valued at 169,895 yen.

SITUATION VACANT.

WANTED.—FOR LARGE OIL REFINERY ABROAD.

ASSISTANT-SUPERINTENDENT and Mechanical Engineer. — Must have had good practical experience in designing and working out mechanical details of refining apparatus, with thorough mechanical training, capable of handling men. Experience in oil refining preferable. A knowledge of Spanish would be useful. Age not to exceed 35.—Apply "Engineer," care of Petroleum Review, 45, St. Mary Axe, E.C.

CLASSIFIED IMPORTS INTO UNITED KINGDOM UP TO MAY 3rd, 1909.

IN GALLONS.

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Country.	Illuminating.		Lubricating.		Residuals.		Gas Oil. (Solar)		Benzine.		Fuel Oil.		Other Descriptions.		Totals.	
	Since Apl. 19.	From Jan. 1.	Since Apl. 19.	From Jan. 1.	Since Apl 19.	From Jan. 1.	Since Apl. 19.	From Jan. 1.	Since Apl. 19.	From Jan. 1.	Since Apl. 19.	From Jan. 1.	Since Apl. 19.	From Jan. 1.	Since Apl. 19.	From Jan. 1.
Austria ...	—	—	6,000	40,930	11,600	161,450	—	—	—	—	—	—	—	—	17,600	202,380
Belgium ...	—	70	23,500	237,650	—	—	—	—	—	—	—	—	—	—	23,500	237,720
Canada ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dutch India.	—	400	—	—	—	—	—	—	—	6,738,600	—	80	—	80	—	6,739,160
Germany ...	415,560	639,560	115,830	412,560	—	2,000	—	—	—	1,000	—	—	—	9,210	531,390	1,064,330
Holland ...	—	300	240	1,900	—	—	—	—	5,000	2,011,410	—	—	2,470	22,240	7,710	2,035,850
Roumania ...	—	3,605,450	—	—	—	24,000	—	2,191,800	—	1,553,540	—	—	—	—	—	7,374,790
Russia ...	—	8,187,570	1,280	2,438,570	—	119,750	—	—	—	886,540	—	—	—	63,780	1,280	11,636,680
U.S.A. ...	4,021,020	43,202,220	2,296,530	15,723,485	—	47,880	3,656,200	22,979,360	—	5,320,240	978,000	4,189,520	16,120	1,259,130	10,967,870	92,781,365
Other Countries	—	800	840	14,970	--	—	—	1,000	—	887,380	—	240	—	1,600	840	905,990
	4,436,580	55,636,370	2,444,220	18,870,065	11,600	355,080	3,656,200	25,172,160	5,000	17,398,710	978,000	4,189 840	18,590	1,356,040	11,550,190	122,978,265

THE BAKU PETROLEUM INDUSTRY DURING 1908.

Detailed Statistics as given by the British Vice-Consul in his Report.

Mr. McDonell, the British Vice-Consul at Baku, has recently drawn up his report upon the trade and industry of Baku during 1908. In his introduction, Mr. McDonell points out that contrary to expectations and promises of a better year, the past year has been anything but a satisfactory one from the point of view of trade generally. True, the situation both as regards the political strife and the labour question has improved considerably in comparison with the past few years, although the labour difficulty still leaves very much to be desired. Many firms, both Russian and foreign, who weathered the storm when at its height, have now had their resources so severely drawn on as to be unable to meet their payments any longer, and this year has been one through which only the very fittest have been able to survive.

Great depression has been felt in the oil industry during the year under review. Labour and the cost of production are more expensive, and over the whole year there has been a heavy fall in the prices obtained for crude oil. All enterprises are feeling the strain of the last few years and taking all possible measures to cut down their expenditure; capital outlay has been reduced to its minimum, and on all sides we find people discharging workmen and working all sections with a minimum complement of men.

As to the prospects for the future it is difficult to prophesy an immediate return to a normal state of affairs. An alleviation of the tension in Persia and a good harvest in Trans-Caspia, would undoubtedly give an impetus to trade with the two countries. The probability of new oil-bearing lands in Baku being given out at Government auctions would call for a fresh supply of materials and greatly ease the question of the unemployed. These auctions were to have been held in November last but were postponed by order of the Duma in order that new conditions might be elaborated.

The question of the immediate future on the oil field is economy in fuel; producers are now studying the use of natural gas for firing instead of the use of crude oil as hitherto. A simple contrivance consisting of a centrifugal fan working through pipes conducted to the wells, thus creating an exhaust, is coming very much into use. In this manner the natural gas issuing from the well is collected and stored, being used either for firing boilers or as gas in gas motors.

There is a good sale for engines and motors working on crude oil and more especially those working on natural gas.

The year 1908 opened with prices for crude petroleum, which, although slightly less than those of the foregoing navigation, were highly remunerative. In March, however, prices broke altogether, and the navigation season of 1908 opened with an unprecedented fall. As a rule a generel stiffening, if not an actual rise, of prices is looked for at the opening of the navigation, and the consequence of this fall was that in April there was a general panic on the exchange and prices have never recovered but remained dead throughout the succeeding winter now drawing to a close.

This sudden fall could in no way be attributed to an excess of production, for the average monthly production for the year under review has been slightly less than that of 1907. The reason of this fall would appear to be more the effect of the high prices of former years, *i.e.*, from 27 to 30 copecs per pood, as it is now more and more apparent that the distributors in the interior of Russia have been steadily losing ground, and petroleum residuum has had to give way to other and cheaper fuels; fresh coal fields have been opened all over Russia and in some cases people have returned to wood.

It must be mentioned that when talking of low prices received for crude oil, it is a purely comparative term; the price has now fallen below 20 copecs per pood, whereas three and a-half years ago such a price would never have been dreamt of even by the most optimistic of oil producers.

Many factors are responsible for this, but the chief reason must be the additional cost of production consequent on the following:—

(1) The smaller yield per well, owing to gradual exhaustion of the strata and the flooding of the same by water, thus increasing the average cost per pood.

(2) The greater depth to which wells have now to be drilled in order to tap new strata, the top strata being worked out, thus increasing the capital outlay required per well.

(3) The extra cost of labour, thus affecting the cost under both the above headings.

During the last three years the cost of labour has augmented enormously, and in spite of the fact that the number of unemployed is increasing monthly. Not only are the wages per man greater than they were formerly, but the standard of living has improved, and considerable allowances are now being drawn by each man over and above his actual pay. Coincident with the organisation and forward movement among the working classes, whereby they have obtained additional pay, the cost of the common necessities of life has more than correspondingly increased; in fact, the spending requirements of the working man have increased in a greater proportion than his earning capacity.

During the first half of the present winter prices for crude varied between 18 and 20 copecs per pood, whilst at the time of writing (February 28th) they have risen to 20 and 22 copecs. It is the general opinion that prices for the forthcoming navigation should remain at about 22 copecs. This price should show a profit to all producers working business on a sound commercial basis, but it is questionable whether many of the companies working on credit, with inflated capitals, will be able to stand the strain.

With regard to kerosene, throughout the winter there has been a brisk demand for this product for export, principally to the United Kingdom; this has strengthened prices, and it is more than probable that kerosene will be at a premium throughout the coming navigation. The winter kerosene campaign for 1908-9 is not yet over, therefore there are no figures to be obtained, but it is considered that the power of the union of the principal interests for the distribution in the interior of Russia has reached its zenith, and that the combination of interests this season has not been nearly so strong or effective.

After prolonged and most difficult negotiations, the attempts made to effect a combine of the shipping interests for the transport of kerosene and residuum on the Caspian have at last been crowned with success, and the shippers are finding that by entering into this combine and being content with smaller profits each individual can now hope to secure his share of the transport on a paying basis.

The work of organising the combine and the allotting of the quantities to be shipped during the coming navigation should be a matter of no great difficulty and should tend to the advantage of the shippers.

Activity in the Surakhany district, which is situated some eight miles south-east of the Balakhani fields, has increased considerably of late. These fields were originally opened up for the production of gas used on the oil fields instead of crude oil as fuel; however, in spite of the increased activity the production of gas has decreased from about 7,000,000 to 4,500,000 poods—reckoning the equivalent in crude petroleum.

Oil, however, has been produced on these fields in appreciable quantities during the year under review. This oil is of quite a different quality from that produced on the other fields and is known on the market as white petroleum. Several fountains have been brought in, but owing to the high inflammability of the oil they have invariably caught fire. These fires are distinct from the other oil fires, owing to the fact that there is practically no smoke. This oil consists principally of gasolene fractions often up to 40 per cent, and has a flash point of about 10° C. In its crude state it escapes the Government excise, and in spite of its dangerous qualities has been greatly used for adulterating kerosene.

Much land has been taken up in this district, but it is mostly peasant land granted for agricultural purposes, and it is only the few who have been fortunate enough to obtain a confirmation of their mining rights.

Taking into consideration the high prices of recent years, the production of the Binigadi district can no longer be considered a negligible quantity, the production for 1908 being about 7,000,000 poods. This crude contains very few lubricants and a small percentage of kerosene, it is mixed with residuum and forwarded into the interior as liquid fuel. The work here is almost entirely in the hands of the natives, and the methods employed for drilling are at present most primitive, the oil mostly being baled by hand from hand-dugs.

Holy Island, situated off the coast the other side of the Apscheron peninsula, is now interesting the public. For many years the firm of Nobel Brothers have been working there practically alone; their production this year has increased considerably, and several other firms are now taking up land on this island. The northern parts of the island are generally considered the better lands.

Tcheleken is about seven hours' journey from Krasnovodsk, and great activity has been displayed here in the acquiring of lands; the main industry being the mining of ozokerite, and practically all the free land has now been taken up. Practically the whole of this industry is in the hands of a combine who have made forward contracts for the purchase of ozokerite; there are, however, occasionally free parcels to be obtained from the native Turkomans, who work their own lands. The price they are asking at present ranges from 5 roubles to as much as 6 roubles per pood (36 lbs.) on the island, weights inclusive of sack. In spite of the work going forward on this island the means of communication are still as scanty and inconvenient as ever.

As is usual during periods of comparatively lower prices, there has been an equivalent falling-off of drilling activity; this is perhaps even more noticeable since the close of the year under review—of course the lack of capital and the general depression are also other causes.

The effect of this curtailment in the drilling programme is bound to be felt in the near future, and unless new lands are opened up and existing wells deepened an increase in the total production cannot be expected.

In the following table are given the details of shipments and despatches of mineral oil products from Baku during the years 1905-8:—

	1905. Imp. galls.	1906. Imp. galls.	1907. Imp. galls.	1908. Imp. galls.
Illuminating oils—				
Exported ..	81,419,353	88,417,120	103,771,740	116,638,128
To Caucasus..	5,406,412	7,201,278	8,173,239	8,262,576
,, Russia ..	165,140,075	147,234,186	204,582,002	167,170,896
,, Persia and Transcaspia	10,387,020	11,569,720	10,081,307	12,302,028
By road ..	2,859,160	3,081,503	3,142,145	3,290,796
Total ..	265,212,020	257,503,807	329,750,433	307,664,424
Lubricating oils—				
Exported ..	10,849,369	33,852,802	28,830,224	32,978,772
To Caucasus..	239,962	463,226	330,867	461,232
,, Russia ..	16,445,754	19,099,075	20,909,881	17,175,024
,, Persia and Transcaspia.	277,564	374,717	59,432	225,324
By road ..	608,044	623,236	856,519	811,080
Total ..	28,420,693	54,413,056	50,986,923	51,651,432
Residuum—				
Exported ..	2,920,820	3,522,604	790,200	11,811,312
To Caucasus..	36,468,619	11,510,478	1,493,467	2,172,312
,, Russia ..	872,278,553	679,766,612	856,435,688	710,930,304
,, Persia and Transcaspia	41,519,808	36,635,281	38,867,054	49,920,740
By road ..	4,418,255	3,967,320	3,233,702	2,422,232
Total ..	957,606,055	735,402,295	900,820,111	777,256,900

Total quantities of petroleum products exported and shipped from Baku during the years 1907-8:—

	1907. Imp. galls.		1908. Imp. galls.
Kerosene	329,750,433	....	307,664,424
Lubricating oils	50,986,923	....	51,651,432
Residuum	900,820,111	....	777,256,900
Crude oil	128,663,507	....	52,921,548
Various products	17,060,624	....	3,170,484
Total	1,427,281,598	....	1,192,664,788

APPROXIMATE AVERAGE PRICES.

	1905. Copecs.	1906. Copecs.	1907. Copecs.	1908. Copecs.
Crude	19½	25½	27¾	21½
Kerosene, export	22	28½	34	27
,, Russia	—	—	36	27½
Residuum	21¾	27½	29	22½

STATISTICS RELATING TO WELLS.

	1905.	1906.	1907.	1908.
Average number of wells—				
Baling each month	880	1,555	1,667	1,820
Drilling and deepening each month	141	279	402	377
New wells brought into production	140	239	237	207
Wells lying idle	2,423	1,443	1,516	1,508
New wells started drilling ..	214	312	237	217

The Petroleum Export Trade of Batoum during 1908.

CONSULAR REPORT.

Consul P. Stevens has recently published his report upon the trade of Batoum during 1908, in which he deals at length with the petroleum export branch. He says that although an improvement in the exports of mineral oils from Batoum during the year 1908 took place, the trade was depressed. The industry is also far from being in a satisfactory condition. Prices of oil at Baku were fairly high during the year, but the wells are apparently giving signs of exhaustion. The production was calculated to be about 10 per cent. short of the production of 1907, which in itself was deficient. The fact of the matter is, that producers have to drill their wells to a very much greater depth than was the case in former years, and as the result is problematic and the sinking of a well costs - owing to the great depth which has to be attained—close on £4,500 and even up to £5,000, producers are not inclined to undertake the drilling of news wells, and all the old wells which have been producing for so many years past are more or less played out. Unless, therefore, new territory is discovered, it is the general opinion that the wells at Baku will only be able to continue to produce sufficient oil for home consumption with no margin for export to foreign countries. Towards the end of 1908 a slight spurt took place in the exports of mineral oil products from Batoum, and at the present moment the trade seems to be very brisk, but I think that this improvement is likely to be only of a temporary character, seeing that when the navigation of the Volga opens there is sure to be a diversion of the trade in that direction.

The boycott of Austro-Hungarian goods in Turkey has to a certain extent influenced the kerosene exports from Batoum during the last two months. Owing to the refusal of the Turks to use Austro-Hungarian kerosene the two case-making factories at Batoum which are still working have had quite a busy time ever since the boycott commenced, and are now manufacturing cans and cases for the despatch of petroleum products to the Turkish markets with greatly increased activity.

I regret to have to report the downfall of several of the British petroleum companies at Baku during the past year, the financial position of which has been going from bad to worse ever since the troubles of 1905 and 1906 took place.

The business affairs of these companies had to be placed in the hands of receivers, and an administration appointed. This measure necessitated strict economy, the result being that work at the oil fields has been much curtailed, and workmen and staffs considerably reduced.

The number of cases of petroleum shipped from Batoum in 1908 was 2,026,104 and the number of cans exported during the same period was 2,549,450, which together represent an actual kerosene export in cases of 5,941,492 poods, or 21,389,364 gallons.

The total quantity of kerosene exported in bulk was 17,507,204 poods, or 63,025,940 gallons, and the grand total of kerosene exports amounted to 23,448,696 poods, or 84,415,304 gallons.

The total exports of other petroleum products, in which are included mazout, spindle oil, lubricating and engine oils, are represented by the following figures: – 19,801,369 poods, or 71,291,236 gallons.

The grand total of the petroleum products that were shipped from Batoum to foreign courtries during the past year were 43,250,065 poods, or 155,706,540 gallons, against 37,073,586 poods (133,464,912 gallons) in the year 1907 and 30,999,197 poods (111,597,609 gallons) in 1906, being an increase of 22,241,628 and 44,108,931 on the two years mentioned respectively.

The quantity of mineral oil products consumed at Batoum and by the copper mines at Dzansoul for fuel and domestic purposes in 1908 was 1,660,505 poods, or 5,977,800 gallons, and the stock of oil in tanks at Batoum on December 31st, 1908, was 5,950,951 poods, or 21,443,420 gallons.

The total quantity of petroleum products brought to Batoum by rail and through the pipe line from Baku in 1908 was 44,625,829 poods, or 159,646,806 gallons, which, with the stock remaining in storage accommodation on December 31st, 1907, viz., 6,235,692 poods (22,448,484 gallons), represented a grand total of 50,861,521 poods, or 182,095,290 gallons.

EXPORT OF PETROLEUM PRODUCTS FROM BATOUM DURING THE YEAR 1908.

		Petroleum Products—		
Month.	Kerosene in Cases. Imp. galls.	In Bulk. Imp. galls.	In Barrels. Imp. galls.	Total. Imp. galls.
January	1,744,488	12,074,616	83,412	13,902,516
February	1,754,892	10,540,296	241,596	12,536,784
March	1,751,436	11,049,228	201,880	13,002,544
April	2,574,972	10,336,584	381,312	13,292,868
May	1,256,328	11,428,056	215,352	12,899,736
June	1,234,728	9,571,248	203 492	11,009,468
July	1,569,888	9,573,660	212,112	11,355,660
August	2,106,972	9,125,856	410,436	11,643,264
September	1,349,208	7,751,412	370,440	9,471,060
October	1,563,624	13,116,420	499,392	15,179,436
November	2,152,764	12,068,028	363,780	14,584,572
December	2,329,992	14,034,528	464,112	16,828,632
Total	21,389,292	130,669,932	3,647,316	155,706,540

The monthly arrivals of petroleum products at Batoum during the past year were as under:—

Month.	Petroleum. Imp. galls.	Engine Oil. Imp. galls.	Solar Oil. Imp. galls.	Mazout. Imp. galls.	Spindle Oil. Imp. galls.	Cylinder Oil. Imp. galls.	Total. Imp. galls.
January	12,467,124	1,830,348	199,368	1,419,456	341,496	4,464	16,262,256
February	14,172,012	1,625,472	4,500	854,316	205,992	103,202	16,965,494
March	8,399,700	1,511,568	188,700	1,174,176	270,612	31,716	11,576,472
April	3,669,624	1,543,536	457,272	1,215,648	318,204	—	7,204,284
May	6,606,432	4,686,876	737,028	959,220	439,666	123,372	13,552,594
June	8,452,296	2,680,740	155,124	933,768	364,284	146,520	12,732,732
July	4,093,812	1,917,000	205,128	786,816	89,532	118,728	7,211,016
August	5,779,512	2,019,340	262,368	758,160	134,424	5,400	8,959,204
September	7,906,356	1,410,768	177,840	571,824	358,236	27,936	10,452,960
October	11,082,168	1,792,288	306,900	1,473,888	358,704	93,096	15,107,044
November	13,791,276	2,541,564	111,096	790,514	394,344	81,252	17,710,046
December	17,237,628	3,025,728	276,480	924,848	398,232	49,788	21,912,704
Total	113,657,940	26,585,228	3,081,804	11,862,634	3,673,726	785,474	159,646,806

THE BURMAH OIL COMPANY, LIMITED.

. . REPORT BY THE DIRECTORS. . .

At the seventh annual general meeting of the shareholders of the Burmah Oil Co., Ltd., which was held at the Merchants' Hall, Glasgow, yesterday (Friday) afternoon, the directors submitted another highly gratifying report. It stated that the net profit, including £30,002 3s. 6d. brought forward from 1907, amounted to £618,551 16s. 9d. from which sum there fall to be deducted the interim dividends paid on 6th November, 1908:—(1) 6 per cent. first preference shares of £1 each —dividend, less tax, £7,125; (2) six per cent. second preference shares of £10 each—dividend, less tax, £21,375; (3) ordinary shares—dividend (free of tax), £82,500, making a total of £111,000. The directors propose that there be placed to general reserve the sum of £200,000, thus leaving £307,551 16s. 9d., out of which they recommended the following final dividends and bonus for the year 1908, viz.:—(1) On the six per cent. first preference shares of £1 each, 7⅕d. per share (equivalent to 6 per cent. per annum from 30th June to 31st December, 1908), amounting, after deducting income tax thereon, to £7,125; (2) On the six per cent. second preference shares of £10 each, 6s. per share (equivalent to 6 per cent. per annum from 30th June to 31st December, 1908) amounting, after deducting income tax thereon, to £21,375; (3) on the ordinary shares of £1 each—numbered 1 to 1,100,000 inclusive:—(*a*) 1s. 6d. per share (equivalent to 15 per cent. per annum from 30th June to 31st December, 1908) free of income tax, amounting to £82,500; (*b*) bonus of 3s. per share, free of income tax, amounting to £165,000, or a total of £276,000, leaving to be carried forward the sum of £31,551 16s. 9d.

The satisfactory result of the year's trading is to a large extent due to a continuance of favourable conditions in the kerosene oil trade in India, where prices and consumption were well maintained throughout the year. The net profit shews an increase of £10,455 18s. 3d. as compared with 1907, and the final dividend and bonus proposed by the directors make a total distribution for the year of 30 per cent.

The directors recommend that further £200,000 be placed to general reserve, which will then stand at £740,000.

In addition to continuing in the proved fields active operations, which have been of a satisfactory nature, prospecting for other oil-bearing land has been carried on with the usual vigour, and while oil has not been struck in paying quantities in any fresh territory, further encouraging strikes have been made in the new district referred to in the last annual report. The unusually large addition to the field, etc., account, is due to purchases of oil lands and to large additions to plant and stocks of drilling materials at the oil fields. This account has been written down on the usual liberal scale, and £80,000 have been placed to field reserve account, making a total of £250,000 at the credit of that account.

The completion of the pipe line was somewhat delayed, owing principally to exceptionally heavy rains in May to August, and also to its being found, after a portion of the line was laid, that the expansion and contraction of the metal was so great that it was necessary to bury the line. Regular pumping was commenced through the upper half of the line on the 12th December, and has been continued without any serious interruption since then. Pumping through the lower half was commenced on the 3rd February, and since that date the line has on the whole been working satisfactorily, putting through larger quantities of oil than was anticipated.

At the refineries important additions have been made to the refining plant and to the storage accommodation for crude oil and refined products. The erection of a new refinery, on a site which had been acquired with a view to providing for any possible extensions in the future, was commenced during the year, and it is anticipated that this refinery will be in full working order by the 1st July next. Depreciation, on the refineries, £66,751 8s. 3d. and on tankers, tank installations, etc., £39,000, is on a liberal scale.

During the year £41,250 of the terminable debentures have been repaid, leaving a balance on 31st December, 1908, of £16,600, which has since been paid off.

This time last year none of the bores in that part of Persia where the Concessions Syndicate, Ltd., was working, had yet struck oil, and it was consequently considered a sound measure of prudence to write down the company's investments in Persia. Later in 1908, however, the position was entirely changed, and, as reports came home of well after well striking oil, the last doubt as to the value of the Persian oil fields was dissipated, the wisdom of the company's having acquired a substantial interest therein was confirmed, and the advisability of its acquiring a predominating interest became manifest. Negotiations were therefore opened with the concessionnaire with a view to inducing him to make over his remaining interest in Persia to the Burmah Oil Co. in exchange for a block of its ordinary shares and the repayment of his expenditure. These negotiations ended successfully, and details of the arrangements come to were so fully set out in the prospectus of the Anglo-Persian Co., a copy of which was posted to every shareholder of this company, that no further report on them is here required. The Anglo-Persian issue was a great success. The 400,000 preference shares available were applied for fourteen times over, and the debentures were over subscribed.

The recent heavy fall in the prices of kerosene in India, although there has since been a recovery, will to some extent affect this year's profits—and added thereto a considerable fall in the price of wax and candles has to be taken into account. In other respects the outlook is quite favourable and it is reasonable to hope that the directors will be able to submit another satisfactory profit and loss account next year.

In accordance with the articles of association, the directors retiring at this time by rotation are Mr. John Innes, Mr. Robert Gourlay and Mr. James Hamilton. Mr. Gourlay and Mr. Hamilton, being eligible, offer themselves for re-election. Mr. Innes has, however, intimated that, with much reluctance, he has decided not to offer himself for re-election, as he finds it necessary to reduce his business engagements as much as possible, owing, the board regret to understand, to considerations of health. The board unanimously recommend that Mr. Gourlay and Mr. Hamilton be re-elected, and that to fill the vacancy occasioned by the retiral of Mr. Innes, Mr. W. K. D'Arcy be elected, as he is now a very large shareholder in the company, and is willing to act.

RUSSIAN NOTES.

Grosny Statistics.—The production of the Grosny fields during February was 4,098,201 poods, or 98,000 poods more than in January.

The Uchta Oil Field.—A group of Moscow gentlemen have formed the North Uchta Petroleum Co., Ltd , for the development of Uchta oil fields.

A New Grosny Company.—A new company for developing the petroleum industry in Grosny has been formed in Moscow with a capital of 1,200,000 roubles by Mr. T. T. Gankin, under the title of Grosny-Moscow Trading Co. Some Belgian capitalists are taking an active part in the new company.

The Approach of the Opening of Navigation has naturally influenced the amount of business concluded and the prices. Over 16,000,000 poods of crude petroleum have been sold at 22¾ copecs. The present prices are still higher, while those for residuals and lamp oil are practically the same—22¼ and 31¾-32 copecs.

Baku Production.—The production in Baku for March amounted to 40,786,557 poods, *i.e.*, shews an increase of 1,200,000 poods as against March of 1908. For the first three months the production has amounted to 111,900,000 poods, as against 115,800,000 poods in 1908, and 117,100,000 poods in 1907.

The Russian Chemical Industry has been enriched by a new product, namely, the aniline oil, manufactured from benzole, which is now extensively produced from petroleum. Until now, aniline has been manufactured from foreign materials by two firms which have been syndicated with aniline producers abroad.

The Bebe-Aibat Bay.—The Mining Department of the Ministry of Commerce has completed the elaboration of the scheme of the draining and filling up of Bebe-Aibat Bay. The project will now be discussed and decided upon by a special committee, in which delegates of the petroleum producers will take part.

The Maikop Petroleum District.—A lengthy report on the Maikop petroleum district has been read before the members of the Grosny branch of the Imperial Technical Society by Mining Engineer Tushkin. In the opinion of the author, the Maikop district, although in many respects differing from the Grosny and Baku districts, possesses almost everything necessary for assuring its petroleum resources a brilliant future.

Extension of the Grosny Fields.—The plot, No. 36 on the property of the company, Russian Standard, on the western boundary of the Grosny fields, which has been considered as unproductive, has suddenly shewn great activity. A spouter of great power broke from well No. 3, on a depth of 276 sagenes, and produced for the first 24 hours 15,000 to 17,000 poods, and is now producing about 8,000 poods daily. The production for the first three weeks was over 250,000 poods. The oil is of 0·845 specific gravity, and is very rich in paraffin. In the same district, on the property of the Kasbeck Syndicate, another spouter broke out, which the first day gave over 16,000 poods of oil.

ROUMANIAN NOTES.

Mr. Carl Perutz, manager (*pro tem.*) of the Steaua Romana, has now been permanently appointed general director of the company.

Exploration Work.—The Prussian State geologist, Dr. Mauke, has obtained leave to undertake, on behalf of the Disconto-Gesellschaft (I. Bleichröder), various exploration work in Roumania.

Refinery Products.—The quantity of crude oil treated in the Roumanian refineries during March was 85,237 tons. Out of this have been produced 14,427 tons of benzine, 20,826 tons of lamp oil, 5,515 tons of lubricating oils, and 43,077 tons of residuals.

Crude Oil Production.—The production of crude oil for the first three months of the year has been 280,000 tons, as against 288,725 tons for the corresponding three months of 1908. It shews a decrease of 8,725 tons or 3·1 per cent. This is the first diminution in the production for a long period of years, and is owing to great difficulties caused by the long and severe winter.

Boring Activity.—The Steaua Romana has instructed the International Boring Co. of Erkelenz to drill a new borehole at Tazlau ; the Prima Sociétatê de Foraj is now boring for the same company two wells at Campina, after having completed two wells at Bacau. The Alliance has one well completed at Campina and another one approaching completion at the same place.

The Market.—The situation on the Roumanian oil market remains unchanged. The consumption of residuals is still on the increase, and the prices are very profitable. The consumption of benzine is shewing a great tendency to increase. In 1908 there were consumed in the country over 10,000 tons of refined and crude benzine. The prices for lubricating oils are firm, notwithstanding competition among the refiners.

A Promising Report.—According to the last monthly report of the Austrian-Hungarian Consul at Ploesti, the petroleum industry has not shewn yet any notable increase at the beginning of this year, but the prospects are very good. The productivity of the new wells at Bustenari and Campina entirely covers the deficit created by the failure of the wells at Moreni, and the results obtained at Calinet-Burloi and Bordeni-Doftanetz are very promising for the future.

Roumanian Exports.—The exportation of crude oil and petroleum products for March, 1909, to different countries, was as follows:—To England, 2,037 tons of benzine and 108 tons of various products ; to Austria, 240 tons of crude, residuals, etc.; to Belgium, 3 491 tons of lamp oil ; to Egypt, 4,586 tons of lamp oil ; to France, 6,882 tons of benzine ; to Germany, 374 tons of benzine, to Italy, 2,435 tons of lamp oil, 1,694 tons of benzine, and 128 tons of various products ; to Turkey, 1,978 tons of lamp oil and 101 tons of various products ; to Spain, 1,430 tons of benzine ; and to Bulgaria, 146 tons of various products. The total export forms 12,566 tons of lamp oil, 12,463 tons of benzine and 606 tons of various products, and shews a decrease of 37,324 tons, against the export in March, 1908.

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LATEST QUOTATIONS OF PETROLEUM SHARES.

ENGLISH COMPANIES.

This list is restricted to companies who have paid dividends or who are producers.

Company.	Capital Paid Up.	Value of Shares.	Latest Prices.
Assam Oil	£310,000	£1	16/6-17/6
Baku Russian Petroleum ..	£750,000 Ord.	£1	0/3-0/6
,, ,, ..	£650,000 5½% Pref.	£1	0/6-1/0
Bibi-Eybat Petroleum Co. ..	£380,000	£1	4/6- 5/6
Californian Oilfields	£400,000	£1	5¼-5½
Commonwealth Oil Co. ..	£500,000 Pref.	£1	9/16-11/16
,, ,, ..	£225,000 Def.	£1	9/16-11/16
Lobitos Oilfields, Ltd. (£1) ..	£360,000	£1	25/0-26/0
Pacific Oilfields, Ltd. (£1) ..	£200,000	£1	24/0-25/0
Russian Pet. & Liquid Fuel ..	£500,000 6½% Pref.	£1	1/6-2/6
,, ,, ...	£600,000 Ord.	£1	1/3-2/3
Schibaieff Petroleum ..	£575,000 6% Pref.	£5	3/16-5/16
,, ,, ...	£575,000 Ord.	£1	0/3-0/9
Shell Transport & Trading ..	£2,300,000	£1	57/0-58/0
,, ,, ,, ..	£1,000,000 Pref.	£10	10⅞-11⅛
Spies Petroleum Company ..	£387,500	10s.	11/9-12/3

RUSSIAN COMPANIES.

Company.	Nom. Value in Roubles.	Quotations on April 19th.	
		Lowest Roubles.	Highest Roubles.
Baku Naphtha Co.	100	314	352
,, ,, ,, (issue of 1908) fully pd.	100	–	280
Balakhany Naphtha Co.	250	—	—
Caspian Society	1,000	3,775	4,250
Mazout Co.	250	—	—
Melikoff, A. C.	250	—	—
Mirzoeff Bros.	250	—	—
Naftalan Co.	250	—	—
Naphtha Co. "Kavkas"	250	—	—
Naphtha Trading Co., A. I. Mantacheff & Co.	250	126	128
Neft Co.	250	—	—
Nobel Bros.	5,000	10,500	10,350
,, ,, ...	250	—	—
Rops and Co. V...	250	—	—
Russian Naphtha Co.	250	—	—
Society Mazout	250	—	—
Ter-Akopoff Co.	250	—	—
Tumaieff & Co., J. G.	250	—	—
Volga-Caspian Naphtha and Trading Co	250	—	—
,, ,, ,, (Second Issue)	250	—	—

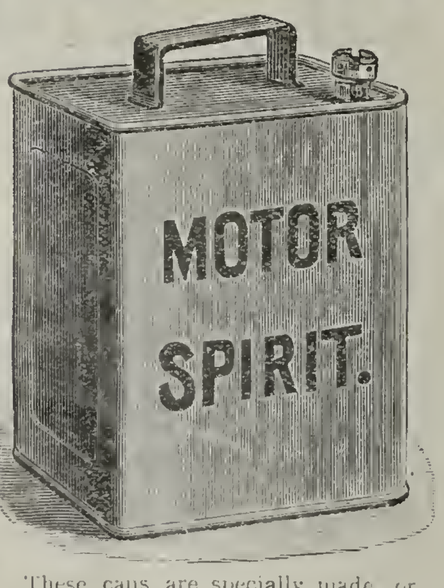
SCOTCH COMPANIES

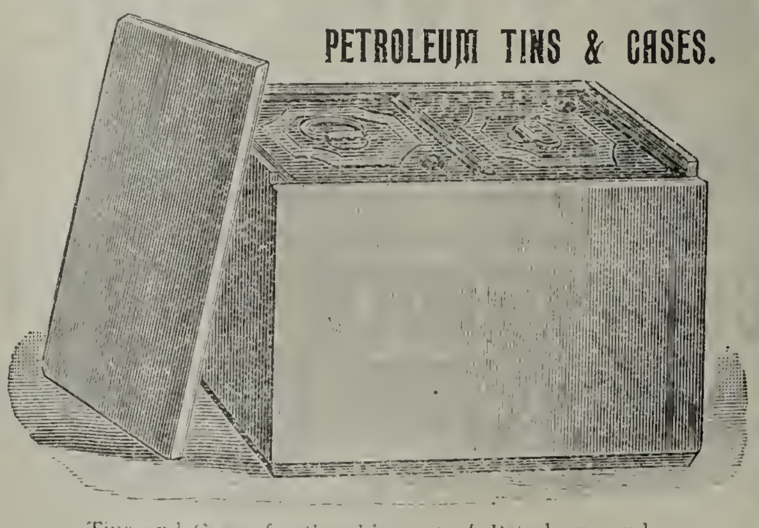
Supplied by Messrs. MACLEAN AND HENDERSON, STIRLING.

Company.	Capital Paid Up.	Value of Share.	Latest Prices.
Broxburn Oil Co., Ltd., Ord. 17/- pd	£235,000	£1	£2 2s. 9d.
Do. 6% Cum. Pref. ..	£100,000	£10	£12 13s. 9d.
Burmah Oil, Ord.	£1,100,000	£1	£5 7s. 0d.
Do. Pref.	£250,000	£1	£1 8s. 6d.
Dalmeny Oil Co., Ord. (7 paid) ..	£37,800	£8 10s	£4 0s. 0d.
Do. 5% Pref. ..	£18,900	£7	£4 12s. 0d.
Oakbank Oil Co., Ltd., Ord.	£170,000	£1	£1 17s. 6d.
Do. Pref. (£1 paid)	£36,980	£1	£1 4s. 0d.
Do. Do. (£1 paid)	£63,020	£1	£1 3s. 9d.
Pumpherston Min. Oil Co., Ld., Ord (17s. paid)	£110,500	17s.	£11 0s. 0d.
Do. 6% Cum. Pref	£100,000	£10	£13 17s. 6d.
Tarbrax Oil Co., Ltd. Ord. (£1 pd.)	£38,350	£1	£2 13s. 9d.
Do. 6% Cum. Pref.	£35,000	£1	£1 5s. 0d.
Young's Paraffin Co., Ltd., Ord. ..	£452,808	£4	£3 9s. 0d.
Do. "B" Deb...	£150,000	£100	£164 0s.

DUTCH COMPANIES.

Company.	Latest Quotations (per cent.)
Dordtsche Petroleum Co. (Ord.)	154⅛
,, ,, ,, (Pref.)	165½
Int. Roum. Petroleum Co.	22¼
Royal Dutch Petroleum Co...	440¼
Mœara Enim Petroleum Co.	195½
Oklahoma Petroleum Co. (Pref. "A")	128¾
Perlak Petroleum Co.	144
Sumatra Palembang Petroleum Co.	168
Zuid Perlak Petroleum Co. (Pref.)	155¾
Union Petroleum Co.	93¾
Bibi-Eybat Petroleum Co.	29¾
Russian Petroleum and Liquid Fuel Co. (Ord.)	10¾
,, ,, ,, (Pref.)	12⅜
,, ,, ,, (6% Debs.) ..	35¼
Schibaieff Petroleum Co. (Ord.)	4⅞
,, ,, (Pref.)	5½
Shell Transport and Trading Co.	283½





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THE
PETROLEUM REVIEW,
45, St. Mary Axe, LONDON, *E.C.*
American Office: 150, Nassau Street, New York.

Saturday, May 8, 1909.

THE PROBLEM OF THE PETROL TAX.

THE one great factor which is at the present time agitating the mind of those engaged in the import and distribution of petroleum products in this country is that of the recently-imposed tax upon petrol. The announcement of the inclusion of petrol in the Budget proposals came to the large importing companies late on Thursday afternoon of last week as "a bolt from the blue." They were in a state of absolute unpreparedness for such an impost, and, as a matter of fact, had never given a moment's consideration to the rumours which several weeks previously had gained currency throughout the city.

It has ever been so. Our large importing and distributing concerns seem to have ever been unmindful of their best interests, and as a striking example of this, we have their position to-day. Exactly a month ago, we announced in these columns that the avowed intention of the Chancellor of the Exchequer was to impose a tax upon petrol, and though we must admit we were unaware that the proposed tax was to be so great, in our own minds we were pretty well certain that the tax was coming upon the industry. At that time we appealed to the trade to arouse themselves, and by concerted action take steps to place before Mr. Lloyd George the simple facts of the case. We leave our readers to judge whether our leading distributive concerns bestirred themselves in the matter or not.

It is an old yet nevertheless true proverb that, "a stitch in time saves nine." If only the English oil trade had discharged the duty which it undoubtedly owed to itself, the present tax would of a certainty have been modified, even if it had not been totally erased from the Budget proposals.

Taxes have to be found, since nations, like individuals, have their obligations to honourably meet. The preparation of a national Budget necessitates a world of consideration to the various trade interests which are to be affected by its proposals, and it is common knowledge that every Chancellor of the Exchequer welcomes communications from those who are, by reason of their position, able to give an intelligent version of how certain proposals will work out in practice. The oil trade certainly lost a glorious opportunity to put the bare facts of the situation before the Chancellor, for had its members gone boldly forward and laid their objections before the Budget maker, the present proposals with which we are now face to face would never have been made.

Seeing that the debate upon them will continue for many days ahead at St. Stephens, there is yet time ere the situation can be given up for lost. In the meantime, however, the following letter was yesterday addressed to the Chancellor of the Exchequer by Dr. Paul Dvorkovitz, and we have no doubt that its succinct nature, together with the stubborn facts which it brings home, will tend to go far to cause Mr. Lloyd George to amend the trend of his proposals. The letter is as under:—

45, St. Mary Axe,
London, E.C., *May 7th*, 1909.

Dear Sir,—As one who has been closely associated with the petroleum trade of this country for the past twenty years and taken an active interest in its gradual development, I may be permitted to briefly address you with reference to the tax which you have proposed to place upon petrol imported into this country for motor spirit purposes.

At the outset, allow me to say I am convinced that by the imposition of such a tax, you are doing a grievous harm not only to the particular branch of this country's oil trade which imports and distributes petrol, but more especially to the motor industry, which, as you will readily admit, has, owing to an absence of fettering restrictions in the past, now become an integral part of national industry.

In your budget speech, you made it clear that the petrol tax was proposed, not for the purposes of national revenue, but in order that motorists should contribute toward the necessary cost of maintaining and improving the condition of our roads. At first sight the idea upon paper may appear feasible, but upon close inspection it becomes quite impracticable. If, as you contend, motors do play havoc with our highways, and the most speedy do the greatest harm, then, by your proposed tax, you are giving steam cars a most unfair advantage, since, running as they generally do upon ordinary kerosene, they will totally escape the tax. Again, it strikes me as being contrary to the spirit of fair-play and equity, that if your desire is that users of the road should individually pay towards its upkeep, you should single out one class of carriage for taxation and allow all others to go scot free. To my way of thinking, it also seems rather unjustifiable that the owner of a motor boat should have his petrol taxed in order that the highways may be improved or kept in repair. It is obviously plain that if you adopt the principle of taxing road users, then the tax should be applicable to all classes: thus by being spread over the whole of the vehicles using the highways, a small tax would be sufficient to meet the necessities of the case.

With respect to the rebates which you suggest upon the petrol tax to commercial vehicles, might I be allowed to make a proposition to you which would effectively meet the case, and at the same time obviate the laborious and no doubt costly process which otherwise must be resorted to of claiming the rebate upon petrol used for commercial vehicles.

You may possibly be aware of the fact that today two classes of petrol are consumed in this country for motor traction purposes—a light and a heavy spirit. The former varies from ·700 to ·720 specific gravity, while the latter ranges anywhere from ·730 to ·760. This latter heavy spirit is now almost universally used by commercial vehicles, for which it is admirably suited, while the use of the lighter spirit is practically confined to pleasure vehicles. My suggestion, therefore, is that by modifying your proposals to such an extent that they will admit of petrol with a gravity above ·730 being exempt from taxation, you will be adopting a policy more in accordance with the principles of equity, and you will also do much to stem the tide of popular feeling against your budget proposals.

In conclusion, I might mention here that there are many refiners in this country who have spent considerable sums of money in order to create a local industry by importing crude motor spirit and re-refining the same in accordance with the local market requirements, and if the present imposition of a tax upon motor spirit be adhered to without any discrimination as to whether the specific gravity be light or heavy, these refiners will have no alternative but to shut down their refineries, a fact which you, with your usual fairness, will agree would be a great injustice to these local industries which have developed in spite of the enormous competition of the large importing concerns.

I trust that my suggestions will be received in the same spirit in which they are written, and that they may go at least some little way in assisting you to solve a problem which bristles throughout with difficulties.

I have the honour to remain, dear Sir,
Faithfully yours,
P. Dvorkovitz.

Backed up, as the above letter ought to be, by the unanimous voice of the trade, there is no doubt that it will produce an effect, the result of which may be permanently seen from the amended Budget proposals. The suggestions it embodies, especially the one dealing with a discrimination as to the light and heavy benzines used upon the English market for motor purposes, are reasonable and based upon experience, and if carried into law they will do much to rid the trade of the cloak which at the moment overhangs it.

THE ADVANTAGES OF LIQUID FUEL FOR MARINE PURPOSES.

By MR. J. J. KERMODE.

The advocates of liquid fuel as compared with solid fuel have had an uphill fight. They have had to maintain the great economic advantages of petroleum for fuel in the face of its higher price. The two points are entirely distinct.

The economic compensations offered by liquid fuel are so many that a higher price can be allowed and in very many cases there is no excess of actual money cost against it. Coal is, under any conditions, a dirty, wasteful, and variable means of raising steam and providing power. Its quality varies so enormously that its wastefulness is not always appreciated to its full extent. There are a number of constituents which are not at all necessary to the provision of heat, they are injurious to boilers and furnaces and harmful to individuals working them.

Coal is costly to handle, and entails a lot of unnecessary work in use. The vast difference between liquid fuel and coal is no more graphically seen than in the bunkering of a vessel with coal, and loading up with oil fuel. It is typical of the two descriptions of fuel—the one the embodiment of clumsiness and uncleanliness—the other clean, easy, and efficient.

With such a vital thing as fuel—the basis of all trade industry and commerce—the change from coal to oil fuel may be slow, though it need not be conservative, and with a wider knowledge of the many advantages which the use of liquid fuel offers, especially in industrial process work, we may look for a wider adoption of oil fuel and for many improvements in the design of boilers and industrial furnaces, which will ensure the best results.

The sources of supply are every day becoming greater in number and several oil companies are making extensive arrangements to facilitate cheap transport, ample storage, and fair prices to meet the undoubted growing demand for the commodity.

Liquid fuel now plays an important part in meeting the present needs of naval ships. It was only in 1902 that we had the honour of demonstrating for the British Admiralty the successful application of oil fuel for the use of torpedo boat destroyers, and this country now possesses many vessels of this type which are fired exclusively with oil fuel.

The adoption of oil fuel for naval needs not only reduces the *personnel* of each ship, but it renders what was formerly the hardest work on board ship light and easy. It adds to the speed of the ship and the smoke column by day, and the pillar of fire by night which characterises the coal-fired torpedo boat had disappeared, with the result that the movements of these vessels are rendered more difficult of detection—a most important featnre in war time.

In order to meet the needs of naval and merchant ships, land boilers of every type, locomotives, fire engines and innumerable process furnaces, we have devised special appliances for three kinds of systems, which enables us to use every kind of liquid fuel with the most economical and successful results in every case, whether the oil fuel is of the fluidity of pure petroleum or of the consistency of tar.

Prior to describing each liquid fuel system in detail, it may be desirable to point out a few of the advantages we claim for this method of firing, and these may be innumerated as follows:—

(1) With our systems of spraying the fuel, any kind of combustible liquid can be used, such as Borneo, Texas, Russian or other crude petroleums or petroleum residue, kerosene, shale oil, blast furnace oil, besides many by-products, such as water gas tar and Mond gas tar.

(2) The combustion is perfect—there is neither smell or smoke, no dust, no waste of oil fuel on starting or on shutting down, no fires to clean, and no soot or ashes to remove.

(3) High calorific value, bulk for bulk, the greater part of the above-named fuels will give off during combustion, nearly twice the number of heat units obtainable from average coal. The cost of transit will, therefore, be about half that of coal and the space occupied will be less. If the fuel is stored in suitable tanks there is absolutely no risk from fire or explosion.

(4) Cleanliness, simplicity of construction, ease of management, perfect and instant control of fires as they can be shut down or started up again at a moment's notice, and unlike a wood or coal fire, no fuel is expended and no heat is lost when the oil fuel supply is stopped.

(5) It is sometimes necessary to draw coal and wood fires when there is a temporary stoppage in the course of working; this causes a risk of fire (if in a factory) and also proves objectionable on account of fumes and dust.

In the case of steamships the advantages may be enumerated thus:—

(1) Cleanliness of handling.

(2) Steady steam, fires never dirty, consequently no tube cleaning. From the effect of dirty fires and boiler tubes fouled with soot and ashes and the necessity of burning down and cleaning fires every watch, quite 12½ per cent. of steam is lost upon a voyage between points seven days apart. The loss of speed is therefore considerable.

(3) Reduction of bunker space to about five-eighths that required for coal.

(4) Reduction in the number of hands in the fire room department, as the apparatus is automatic in action and one man can attend to several boilers.

(5) Those portions of a ship which are now useless for coal bunker purposes through their narrowness or position are always available for the storage of oil fuel. In this way the double-bottom can be used, and the trim of the ship can be preserved by the admission of sea water to the emptied oil tank. There need be no such thing as a list to port or starboard, through being obliged to use fuel out of one bunker more than [another. A

steam pump will readily remove oil fuel from port to starboard or *vice-versa*, when the same expedient is impossible with coal.

(6) The bunkering of the largest ship can be effected cleanly and silently in a few hours, as hundreds of tons of fuel can be pumped into the bunkers in an hour.

(7) There is no smoke even when steaming at full speed, and the fires can be checked instantly if the engines are slowed and quickened again as instantly to meet the quicker speed of engine.

(*a*) NOTE.—All boilers of whatever type are available for the use of liquid fuel without any modification in the arrangement of furnace as used for coal, except in some special cases.

(*b*) In the case of industrial process furnaces, oil fuel will sometimes do three times the amount of work of coal. Much depends upon the design of furnace, and too much attention cannot be given to this important matter.

(*c*) The important improvements which have been effected in the fire brigades of some of the leading cities of this country and also abroad is owing to the adoption of liquid fuel, and the Liverpool, London and numerous other fire brigades use the Kermode liquid fuel system, and liquid fuel has rendered it possible to have self-propelled steam motor fire engines of great power, speed and efficiency.

The difficult problem of bunkering a war ship at sea is got over at once if oil fuel be substituted for coal. The varying demands of an electric power station are instantly met by its use—a cartage of coal soot and ashes, the inevitable dust associated with the use of coal is got rid of and the smoke stack is innocent of smoke. These considerations are important factors in the case of our largest cities.

Liquid fuel has been used for locomotives for a great length of time, and there is no reason why it should not be adopted for a great variety of steam craft which ply on our inland canals and for the coastwise steam lighterage service.

So infinite are the uses to which liquid fuel may be put and in very many instances the economies which can be effected are so striking, when every aspect of the question is studied, that the relative value of oil fuel versus coal cannot be decided hastily by a mere comparison of the relative prices of the two fuels.

The relative cost of fuel alone is the chief consideration of most business men who overlook the important factor of cheaper production, and more of it, and time saved.

To the worker it means, in most cases, better wages, owing to the greater output of work, it also means healthier conditions of employment.

In foundry practice the use of oil fuel will reduce the time taken to dry large cores to a third of the time which it takes to do the same work with coal or coke. Thus, there is not merely the time saved on one operation to be considered, but the all important factor of the speed with which moulds can be ready, castings completed, and goods despatched far outweigh every consideration of cost of fuel.

On the assumption that a foundry floor is available one and a-half times as often, owing to the employment of liquid fuel for the purpose mentioned, the cost of fuel hardly counts, as it is overshadowed by the many advantages gained.

There is not a process where heat is requisite where the operation of heating cannot be more rapidly accomplished with oil fuel than with coal, and the absolute control over temperature, absence of smoke, smell, soot and clinker are points in favour of liquid fuel and for the healthier conditions of working which its employment makes for.

Oil fuel can be used for the most delicate operation. Tea drying in Ceylon is done by its aid, and experience shews that the natives experience no difficulty in using the appliances we have devised for the purpose. The combustion of the fuel is so perfect that there is not the slightest odour in the factory.

In many of the metal trades, such as the bedstead and bicycle tube factories, the number of sheets of metal spoiled in the rolls, owing to the plates being imperfectly heated, are considerable. Coal fires are ever irregular, despite careful attention, but the automatic oil fire would

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Our Kerosene and Gasoline are manufactured from high grade Oklahoma Crude Oil.

Prompt Shipments from New York, Philadelphia, Boston, New Orleans and Port Arthur, Texas.

Special Prices to Large Jobbers and Refiners
CORRESPONDENCE SOLICITED.

General Sales Office—**FRICK BUILDING ANNEX, PITTSBURGH, PA., U.S.A.**
European Representative—**H. E. WATSON, 10, RUE THIMONNIER, PARIS, FRANCE.**

insure that every heat was uniform, and the percentage of waters would be reduced to a trifling amount.

In the reduction of certain ores, absolute control of temperature is the great factor, as every metallurgist knows, and oil fuel could be used here with advantage.

Many ores that are poor and if treated in a coal fired furnace, would scarcely pay for the fuel and labour expended, might, if treated with liquid fuel as a substitute for coal, give a satisfactory return.

In the art pottery business many valuable pieces are ruined by imperfect firing, where coke or coal is used and both time and art is expended upon material which is doomed to be condemned, when probable modification of design of oven and the adoption of oil fuel would considerably diminish the number of faulty pieces of ware.

If the Cunard express steamers "Lusitania" and "Mauretania" were to use oil fuel, the present fast passages could be largely improved upon, and even in the matter of earning there would be considerable advantage, due to the fact that the fire-room *personnel* could be reduced, and also to the greater amount of cargo and passengers which could be carried. A rough comparison may be stated as follows :—

NEW YORK TO LIVERPOOL.

	£ s. d.		£ s. d.
Coal—5,500 tons, at 18s.6d. per ton f.o.b.	5,087 0 0	Liquid Fuel—3,300 tons, at \$9 per ton, carried in double bottom ..	6,187 10 0
285 men at £1 5s. per week	365 5 0	By amount in favour of liquid fuel ..	5,855 15 0
200 extra passengers, at £5 per head, estimated profit 50 per cent.	500 0 0		
5,500 tons cargo, at £1 per ton.. ..	5,500 0 0		
	£11,443 5 0		£11,443 5 0

LIVERPOOL TO NEW YORK.

	£ s. d.		£ s. d.
Coal—5,500 tons, at 18s. 6d. per ton f.o.b.	5,087 0 0	Liquid Fuel—3,300 tons, at 57s. 6d. per ton	9,487 10 0
285 men at £1 5s. per week, being extra to those required if liquid fuel were used	356 5 0	By amount in favour of liquid fuel ..	1,955 15 0
200 extra passengers, at £5 per head, estimated profit 50 per cent.	500 0 0		
5,500 tons cargo, at £1 per ton.. ..	5,500 0 0		
	£11,443 5 0		£11,443 5 0

The advantage of using liquid fuel is strikingly exemplified in the following figures, which relate to the results which can be obtained on a steam boiler, fitted with any one of the three systems we manufacture.

Oil fuel, which has a theoretical calorific value of 19,320 British thermal units per pound, is capable of corporating 20 lbs. of water from and at 212° F. (theoretically) for every pound of oil consumed and if our air-jet system is used, from 15·6 to 16·6 lbs. of water can be evaporated per lb. of oil consumed under practical working conditions. That is to say, from 78 per cent. to 83 per cent. of the theoretical calorific value of the oil fuel is recovered for useful work.

Our pressure jet system will recover from 70 per cent. to 75 per cent. of the theoretical calorific value of the oil fuel used in actual practice. That is to say, with oil fuel of 19,320 B.T.Vs. per lb. the evaporation per lb. of oil consumed would be from 14 to 15 lbs. of water per lb. of oil consumed.

Our steam jet system will recover from 68 per cent. to 74 per cent. of the calorific value of the fuel used, or a pound of oil fuel will evaporate from 13·6 to 14·8 lbs. of water.

For dealing with the by-product (tar) from the Mond gas power plant we have devised a special system which is of the utmost value to users of the Mond gas plant, as a hitherto worse than useless refuse is utilised as liquid fuel on the boilers which supply the gas plant with steam, and by this means an enormous saving is effected in the fuel bill.

NOVOROSSISK EXPORTS DURING 1908.

OFFICIAL STATISTICS.

The export of mineral oil products from Novorossisk during the year 1908 was as under :—

Desiination.	Kerosene. Tons.	Residuum. Tons.	Benzine. Tons.	Total. Tons.
France	5,041	—	7,558	12,599
Germany	—	—	15,529	15,529
United Kingdom.. ..	—	—	13,539	13,539
Russia	10,116	16,548	—	26,664
Spain	—	1,713	—	1,713
Netherlands	786	—	—	786
Belgium	—	—	2,511	2,511
Total, 1908 ..	15,943	18,261	39,137	73,341
,, 1907 ..	34,414	24,922	31,543	90,879

THE TEXAS COMPANY,
Transporters, Refiners and Distributors of Petroleum and its Products.
CRUDE BENZINE & DEODORISED BENZINE.
FUEL OIL AND GAS OIL
A Specialty.
LUBRICATING OILS.
HIGHEST GRADES. ✠ *UNIFORM QUALITY.*
"TEXACO" BITUMEN.
Over 99 % Pure Bitumen.

THE ORIGIN OF PETROLEUM.

SPECIALLY TRANSLATED FROM THE "MONITEUR DU PETROLE ROUMAIN."

By Prof. L. MRAZEC, Director of the Geological Institute of Roumania.

Crude petroleum is a liquid mixture of gaseous liquid and solid hydrocarbons, all dissolved one in another. The gaseous and partly liquid hydrocarbons are volatile and easily evaporate in the air, leaving behind them a mixture of the heavier liquid and of the solid hydrocarbons.

Hydrocarbons are found everywhere in the earth crust, in the sedimentary, as well as in the eruptive rocks. They may be of internal origin, as a result of de-gasification of incandescent substances in the interior of the earth, or they may result from putrefaction of organic substances. Detailed researches of petroleum strata of different geological ages and of various petroliferous regions of the earth have shewn that the hydrocarbons of the sedimentary rocks, and especially of the petroleum and asphaltus strata have an organic origin.

Indeed, if we examine the transformation of organic matter and especially of living organic matter, after the extinction of life, we find two processes at work, giving two different results; under the action of air and water the organic matter decomposes by oxidation and gives place to gaseous products rich in oxygen; but being deprived of air the same organic matter putrifies and bituminises and produces different gaseous, liquid and solid substances rich in carbon and hydrogen, but poor in oxygen. Another process, similar to the last mentioned, is the carbonisation of plants losing their oxygen, hydrogen and nitrogen, so that the resulting matter forms more or less pure carbon. Bituminisation and carbonisation are very similar and take place at the same time, so that there seldom exists coal entirely free of bituminous matter, which, in certain cases, as for instance in the Boghead coal, enters in a very large proportion into the composition of coals.

The process of bituminisation is a general process, one of those great natural processes which are closely connected with life and sedimentation, and began to take place from the moment life appeared on the surface of the earth. We can say that there are in existence no sediments like argillaceous limestone, clay, marne, silex, etc., where we do not find at least traces of hydrocarbons. But, of course, the formation of rich petroleum deposits is limited to certain formations of geological systems and strata.

Petroleum bearing rocks are the rocks in which the hydrocarbons have taken origin or in which they have accumulated. They are: (1) argillaceous rocks, clays and marles, argillaceous clays and dolomites; and (2) silicious rocks as for instance silicium strata, strata of argillaceous silicium, dissodiles, etc.

The argillaceous rocks usually shew the general saliferous aspect of the geological strata in which they are found, and that is why petroleum is almost invariably accompanied by salt water. In these formations we find especially in Roumania, Germany, Persia, etc., salt deposits encased in rocks very rich in hydrocarbons. The fact that large quantities of hydrocarbons are to be found but in saliferous formations is easily explained by the following circumstances of physical, chemical, and biological nature. All the salt solutions on the surface of the earth, *i.e.*, the water of the seas and of the salt lakes, etc., possess a great power of production, which is due principally to hydrocarbons absorbed or dissolved in these solutions. Dr. Edeleanu has obtained hydrocarbons by heating at a very high temperature the water of a salt lake in Roumania. Experiments have proved that in the water of the Bay of Naples carbon in form of hydrocarbons is present in considerably larger quantities than carbon in form of carbonic acid gas.

The salt solutions thus play an important *role* in the formation of hydrocarbons. They seem to be one of the principal conditions for formation of bituminous matter in large quantities, and from numerous observations it is evident that their bituminising power is the greater the more concentrated they are and the higher their temperature is. From the chemical point of view, judging from the investigations of Kuenkler and Schwedhelm, the action of salt water must be of a saponifying nature, namely, the salts of the fatty acids are decomposed and hydrocarbons are freed.

But besides this chemical action the salt solutions manifest an electrolytic action; they rapidly and completely precipitate all suspended matter, consisting mostly particles of clay and of organic matter. The former being of colloidal nature absorbs the latter and deposits it at the bottom of the sea, where it is soon covered by more clay and so on, and being now deprived of the action of oxygen, it rapidly bituminises. In this way deposits of bituminous clay are formed.

As regards the question of the species of the living organic substance which forms the basis for the formation of the enormous quantities of hydrocarbons, the answer to it is very easy. From numerous investigations of the petroleum rocks it is evident that animals of large size and superior organisation do not take part in the formation of petroleum. Studying the life of salty solutions we at once note that it is very rich in individuals, but very poor in variety of species. There is consequently in the salt lakes and thalassic seas very little struggle for existence and the volume of living matter—micro-organisms—is enormous, and considering the shortness of life and the extraordinary power of reproduction of these latter, it becomes clear that they alone are quite sufficient to supply all the material for the formation of the richest deposits of petroleum.

As to the hypothesis that the bituminisation of organic matter has some relation to massacres in masses of living things, it hardly stands to reason. Besides some quite exceptional cases, it cannot be conceived how these massacres could regularly and repeatedly be produced in all the sediments. The restriction of species naturally resulting from such massacres is just on the contrary a factor hindering the gradual and regular process of bituminisation.

The silicious petroleum bearing rocks are formed in an analogous way; here as well as in the argillaceous rocks, the principal *role* is played by salt solutions. Of course, an aboundance of inferior micro-organising life is self-evident.

(*To be continued.*)

CALIFORNIA OILFIELDS, LIMITED.

A THIRTY PER CENT. DIVIDEND.

The eighth annual general meeting of the shareholders of the California Oilfields, Ltd., was held on Wednesday afternoon, at Winchester House, Old Broad Street, London, E.C., Mr. Robert Balfour, M.P. (chairman of the company), presiding.

The Secretary (Mr. F. W. Bishop, F.C.I.S.) having read the notice convening the meeting and the report of the auditors,

The Chairman moved the adoption of the report and balance sheet. In doing so, he said the profit for the year had amounted to £155,459 1s. 2d. An interim dividend of 10 per cent., free of income tax, was paid in October last, and the directors now proposed to pay a further and final dividend of 20 per cent., also free of income tax, making 30 per cent. for the year. Those distributions amounted to £120,000, as compared with £154,000 for 1907; but the directors had brought into the account for 1908 only £7,169 1s. 6d., whereas they were carrying out £22,628 2s 8d., and, moreover, had cancelled £20,000 of debentures—equivalent to an appropriation to reserve account—as against £10,000 transferred to reserve account from the earnings of 1907. On reference to the balance sheet it would be observed that an addition of £8,620 16s. 8d. had been made to property account, being purchase price of the property and equipment of the Valley Water Co. The maintenance of the operations of the California Oilfields, and especially the drilling of new wells, required a considerable supply of water, which in the Coalinga district of California could only be obtained by pumping, and it was deemed advisable that the company should acquire its own source of supply. The investment was yielding a good return on the basis of charges current in the district, and a substantial income was being obtained from supplies furnished to other local consumers.

The amount at the debit of equipment and development account on December 31st, 1907, was £92,553 5s. 5d., which had been increased as at December 31st, 1908, to £209,193 15s. 10d. That large addition to what might be described as the operating assets of the company was the natural and necessary result of the growth of its operations, and represented the expenditure, after writing off depreciation, on the new headquarters and other buildings, wells, and materials therein and directly connected therewith, pipe lines, tanks, machine and blacksmith shops, tank manufacturing shop, planing mill, electric plant, and all the equipment of the company, with the exception of comparatively unimportant items specially mentioned in the balance sheet. The drilling of new wells—that was, development work—had been carried on more extensively than in previous years, and deeper territory and a larger number of wells were being dealt with. The expenditure under the head of development had consequently increased considerably, and it was to be expected that it would continue comparatively large.

Inquiries had been made from time to time with respect to amounts written off for depreciation, but he submitted that the point of more essential importance was whether the balance sheet valuation of £209,193 15s. 10d. fairly represented the value, as a "going concern," of the equipment and development which had been described. At last annual meeting it was stated that the company then had fifty-nine producing wells. Development work had been continued on about the same lines as heretofore, implying, as was explained at last meeting, wells of greater depth, which were more costly to drill and took longer time to complete—objections, however, which were usually compensated for by greater productivity and length of profitable life. The number of producing wells on December 31st had increased to 73, and 16 additional wells were being drilled. Only limited progress had yet been made in developing the properties acquired in 1907. It had fitted in more conveniently and economically with the scheme of development to devote attention largely to the territory previously in hand. It would interest the shareholders to know that advices had been received to the effect that the current value of similar properties was now much higher than the price paid by their company in 1907. Deliveries for 1908 compared with previous years as follows: 1908, 3,563,678·77 barrels; 1907, 3,242,942·44 barrels; 1906, 2,512,654·58 barrels; and cable advices of the production since January 1st indicated a further increase during the present year. The production of the Coalinga district, in which the properties of their company were situated, during the past three years had been as follows: 1908, 10,730,000 barrels; 1907, 9,855,000 barrels; 1906, 8,500,000 barrels. The production of the State of California in the same years had been: 1908, 48,000,000 barrels; 1907, 40,000,000 barrels; 1906, 30,500,000 barrels; shewing a rapid and continuous increase, and the indications were that the production for 1909 might be still larger. The world's production during the past three years appears to have been about as follows:—United States, 1908, 180,000,000 barrels; 1907, 166,000,000 barrels; 1906, 125,000,000 barrels; Russia, 1908 52,500,000 barrels; 1907, 62,000,000 barrels; 1906, 60,500,000 barrels; Galicia, 1908, 11,000,000 barrels; 1907, 8,000,000 barrels; 1906, 5,500,000 barrels; Roumania, 1908, 8,000,000 barrels; 1907, 8,000,000 barrels; 1906, 6,500,000 barrels; Sumatra, Java, and Borneo, 1908, 16,000,000 barrels; 1907, 10,000,000 barrels; 1906, 10,000,000 barrels; India, 1908, 4,500,000 barrels; 1907, 4,000,000 barrels; 1906, 4,000,000 barrels; Mexico, 1908, 4,000,000 barrels; 1907, 2,000,000 barrels; 1906, not reported; sundries, 1908, 2,000,000 barrels; 1907, 2,000,000 barrels; 1906, 2,500,000 barrels; the totals being, 1908, 278,000,000 barrels; 1907, 262,000,000 barrels; 1906, 214,000,000 barrels—from which it will be observed that the production of the United States continues the dominating factor. Petroleum deposits are being sought for in various countries, and recent discoveries in Persia seem likely to prove important. There is, however, no reason to apprehend that the world's supplies will be in excess of requirements.

Prices of high grade petroleum in the United States appeared to be well maintained, while inferior qualities, the chief value of which was for fuel, had declined in value and were in some districts difficult to sell, in part owing to inadequate facilities for transport. The increasing production in California continued to find profitable outlets, both for fuel and refining purposes. Liberal shipments of fuel oil from California continued to be made to North Pacific Coast ports, the Sandwich Islands, and to Central and South American ports. It was estimated that about 18 per cent. of the production of California was shipped to coast and foreign ports. Quotations for Californian fuel oil are about $1 per barrel f.o.b. San Francisco. The shareholders would be pleased to know that the board had received advices to the effect that the property and equipment of the California oil fields was in excellent condition.

In conclusion, Mr. Balfour said that to their great regret they had received a cablegram a few days ago announcing the death of Mr. A. J. Graham, brother of their general manager. Mr. A. J. Graham had occupied the position of superintendent from the commencement of their operations, eight years ago, and he had met him on the various occasions when he had visited Coalinga and he formed a very high opinion of his character and capacity. He had been most assiduous in his attention to the interests of the company, and therefore he desired to take that opportunity of expressing their sincere appreciation of his valuable services. He then proposed the following resolution: "That the report and accounts for the year ended December 31st, 1908, as submitted to this meeting, be received and adopted, and that a final dividend of 20 per cent., free of income tax, making the dividend for the year 30 per cent., be paid."

Mr. J. S. Harmood-Banner, M.P., seconded the motion.

Mr. C. F. Howell inquired as to whether the company was getting an increased price for its oil; and, in reply, the Chairman said that they were to-day receiving approximately the same price to that received in the past, and he hoped that their oil would realise a similar figure in the future.

Mr. Hodgson asked what had been the increase in the production of the company's wells during the present year, and also if the wells which they drilled when they first commenced operations were still productive?

The Chairman replied that all indications pointed to an increased production during the current year. As to their earlier wells, those were drilled only to a comparatively shallow depth, in what was known as the upper sand, and naturally they were not so productive as the later wells drilled into lower sands. He was pleased, however, to say that so far the company had not a single dry well.

The report and balance sheet were then unanimously adopted.

Mr. C. H. Moore was re-elected a director, on the proposition of the chairman, and on the motion of Mr. J. Halliday, Mr. Robert Balfour, M.P., was unanimously re-elected to the board, Mr. J. S. Harmood-Banner, in seconding, assuring the shareholders that their chairman had always the interests of their company at heart.

The auditors were then re-appointed, and a hearty vote of thanks passed to the company's general manager (Mr. W. W. Graham) and staff for their services during the past year, on the proposition of the Chairman, closed the meeting.

THE OIL SHALES OF CANADA.

At a recent meeting of the New York section of the Society of Chemical Industry, Prof. Charles Baskerville read a paper by W. A. Hammon and himself on "The Canadian Shales." After relating the early history of the shale oil and bituminous oil industry in Scotland, the authors told of the beginning of the industry in North America by Dr. A. Gresner in the forties, its growth and decline after the discovery of petroleum.

The Canadian (New Brunswick) shale fields were next taken under consideration and described. The authors believed the known deposits of shale to cover an area of 200 square miles, there being about 300,000,000 tons in sight. The chief fields are the Taylorville, with a 13-foot bed; the Albert mines, where the beds are 26 feet wide, and the Baltimore field, with a 22-foot bed. These shales belong to the later Devonian age and are found between the strata of that age and the carboniferous deposits, and contain various proportions of albertite.

The oil content of the New Brunswick shale ranges from 35 to 110 gallons per ton. Samples aggregating 36 long tons, 15 hundredweight, were experimentally retorted in Scotland, the yield being 48 gallons of crude oil, specific gravity 0·92 from each long ton; and 77 pounds of ammonium sulphate per ton. There was also more than sufficient gas generated to heat the retorts. Other samples examined in the laboratory gave from 35 to 65 gallons of crude oil per ton, and 67 to 111 pounds of ammonium sulphate.

This crude oil has a calorific value of 18,474 B.T.U. From each 100 gallons of crude oil there has been obtained on the average 1·6 gallon heavy naphtha, 10 gallons burning oil, 15 gallons gas oil, 3 gallons cleaning oil, 10 gallons lubricating oil and 2·9 pounds refined paraffin wax.

The commercial production of shale oil depend upon the oil-content of the shale, the amount of shale available and the amount of sulphate of ammonia obtainable as a by-product. All these requirements were satisfied in the case of the Canadian shales, in the opinion of the authors, who stated that the sulphate of ammonia produced would pay for all the operating expenses.

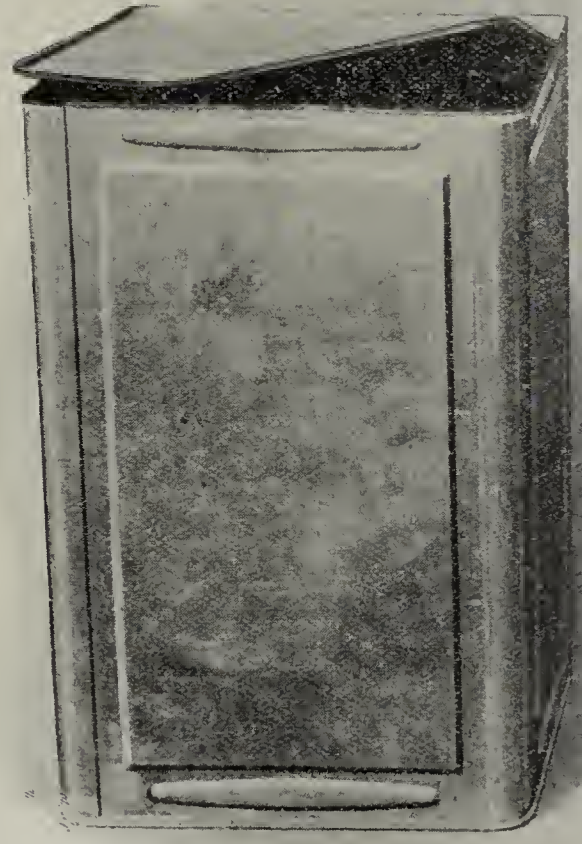
◆

GERMAN PETROLEUM IMPORTS FOR MARCH.

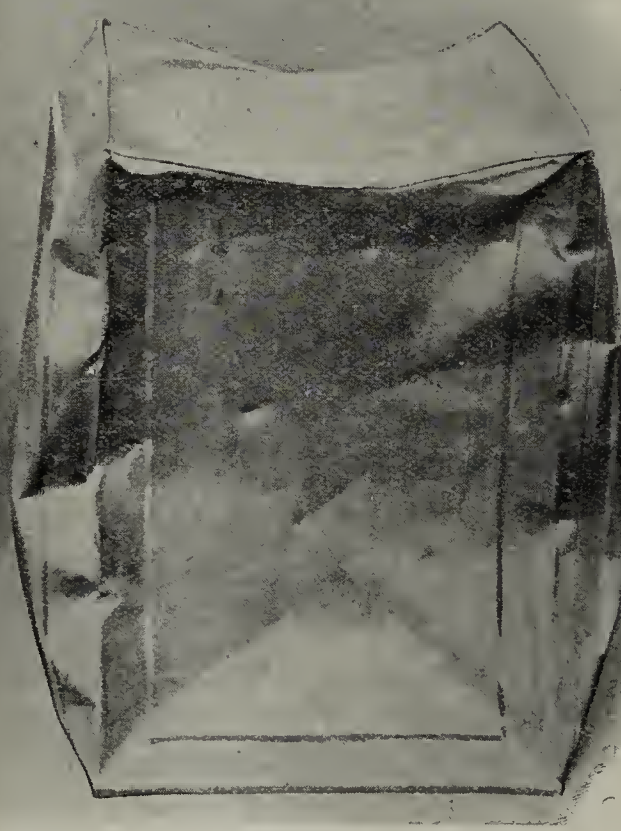
The imports of the principal petroleum products into Germany from the various petroleum producing countries during March were:—

Country.	Illum. Tons.	Lub. Tons.	Benzine. Tons.	Gas Oil. Tons.	Crude Oil. Tons.
U.S.A.	62,307	8,569	—	—	1,908
Austria-Hungary ..	12,793	2,418	262	2,971	531
Russia	2,455	6,301	—	—	—
Dutch India ..	—	—	278	—	375
Roumania	2,498	—	—	—	—
Other Countries or of unknown origin	—	163	—	—	—
Total ..	80,053	17,451	541	2,971	2,814

CAN-MAKING PLANT.



American "Hemmed-edge" Can, showing how easily the end can be forced off.



"Rhodes" "Double-seamed" Can, after being heavily hammered the ends are just as firmly attached.

DOUBLE SEAMED CANS, as made by "Rhodes" Patent Machinery, are produced at **same or less cost** in every respect as the "Hemmed-edge" Can.

Sole Makers— **J. RHODES & SONS, LTD.,** Grove Iron Works, WAKEFIELD, ENG.

AMERICAN EXPORTS FOR MARCH.

OFFICIAL STATISTICS.

According to the official publication of the Washington Bureau cf Statistics, the exports of petroleum from America from the various ports during March were as under :—

	1909. Quantities. Gallons.	1908. Quantities. Gallons.
Crude—		
Baltimore	—	—
Boston and Charlestown	—	—
New York	1,565,432	65,000
Philadelphia	2,178,666	5,668,205
Galveston and Sabine	6,177,265	2,152,372
San Francisco	2,562,000	—
Totals	12,483,363	7,885,577
Total value for the month, 1908		$451,911
,, ,, ,, 1909		$498,273
Naphthas—		
Baltimore	100	1,702
Boston and Charlestown	—	1,000
New York	4,372,152	652,966
Philadelphia	1,760,567	9,500
Galveston and Sabine	4,100	3,087
San Francisco	5,233	25,137
Totals	6,142,152	693,392
Total value for the month, 1908		$111,259
,, ,, ,, 1909		$651,054
Illuminating—		
Baltimore	—	2,671,250
Boston and Charlestown	3,750	2,852
New York	58,664,919	57,881,775
Philadelphia	27,875,770	20,461,828
Galveston and Sabine	6,664,899	5,979,018
San Francisco	4,602,906	5,863,229
Totals	97,812,244	92,859,952
Total value for the month, 1908		$6,618,492
,, ,, ,, 1909		$6,345,843
Lubricating—		
Baltimore	464,748	417,267
Boston and Charlestown	13,403	22,587
New York	7,966,614	10,069,150
Philadelphia	4,499,341	4,838,354
Galveston and Sabine	1,040,312	13,854
San Francisco	56,541	29,013
Totals	14,040,959	15,390,225
Total value for the month, 1908		$1,951,352
,, ,, ,, 1909		$1,686,642
Residuum—		
Baltimore	—	—
Boston and Charlestown	15,000	—
New York	35,350	—
Philadelphia	733,826	1,248,557
Galveston and Sabine	4,136,296	1,955,938
San Francisco	1,771	—
Totals	4,922,243	3,204,495
Total value for the month, 1908		$111,474
,, ,, ,, 1909		$171,997
Total Mineral Oils—		
Baltimore	464,848	3,090,219
Boston and Charlestown	32,153	26,439
New York	72,604,467	68,668,891
Philadelphia	37,048,170	32,226,444
Galveston and Sabine	18,022,872	10,114,269
San Francisco	7,228,451	5,917,379
Totals	135,400,961	120,033,641
Total value for the month, 1908		$9,244,488
,, ,, ,, 1909		$9,353,809

TEMPORARY ADDRESS.

J. C. GOODALL,
24, Forest Road,
Kew Gardens, S.W.

Late Manager, London Branch, Homelight Oil Co., Ltd.
P.O. Tel. 1272 Richmond.

AMERICAN NOTES.

A Record Canadian Gas Well.—The record flow of over 3,000,000 cubic feet of natural gas per day has recently been obtained from one of the municipal gas wells sunk to a depth of 1,000 feet at Medicine Hat, Saskatchewan.

A Proposed New Canadian Refinery.—The British-American Oil Co., of Toronto, is at present negotiating for a long lease of land in that city upon which to build an oil refinery. The company estimates that it will spend upon the proposal about a $1,000,000.

An Important Alliance.—It is stated upon good authority that the Waters-Pierce Oil Co. has allied itself in Mexico with the Eagle Oil Co. for the formation of a new organisation with a capital of $30,000,000. The new concern will operate extensively in the Mexican oil industry.

To Curtail Californian Production.—In order to curtail the production of crude oil as much as possible, the Bakersfield Independent Agency has decided to urge all oil producers to agree to a cessation of all development for six months, except in the case of wells already in the course of drilling.

The Union Oil Company's New Pipe Line.—The Union Oil Co. of California has just received a permit from the War Department at Washington, authorising them to construct a pipe line from its refinery at Santa Barbara, 2,000 feet into the ocean, and to erect a dolphin at the outer end for the purpose of pumping the oil direct into ocean-going tankers.

A Large Mexican Producing Company.—It is reported that the International Oil and Gas Co., which owns rights upon 10,000,000 acres of land in Mexico, will possibly become the largest oil producing company in Mexico. Its extensive territory is situated in the eastern part of the State of Chihuahua, and boring operations are to be commenced immediately.

A Petroleum Duty Wanted.—One hundred prominent independent oil producers and refiners appeared before President Taft in Washington on April 22nd, in an endeavour to have a duty placed upon petroleum. They claimed that free petroleum would seriously cripple their business, for oil could be shipped from Mexico to New York cheaper than they could produce it.

Production Ahead of Demand.—Californian oil producers, like those of Oklahoma, are at present suffering from a too great production of crude oil. It is stated that the production each day is 10,000 barrels greater than the demand, and unless the drill can be stopped for a time, the excess production will reach 20,000 barrels daily. Over 13,000,000 barrels are now above ground.

Increasing Texas Imports.—During March, according to official statistics, the exports from the Texas ports amounted to over 18,000,000 gallons, or nearly double what they were for the corresponding month a year ago. For the nine months ended March, the total exports from Texas amounted to 116,000,000 gallons, as against 57,000,000 gallons for the nine months ended March, 1908.

Large Wells in Mexico.—A driller, writing from Mexico, says that quite recently there has been completed a 10,000-barrel well, situated under two miles from the now famous well which burned for several months last year. There are an immense number of wells, he says, in the field, but these are now shut up, and so it is difficult to estimate what they would produce. He is certain, however, that in Mexico there is the largest oil field in the world.

A Coming Geological Report upon Mexico.—The Government of the United States is taking a great interest in the oil developments in Mexico, as is seen from the fact that Dr. David T. Day and Dr. C. W. Hayes are both on a visit to Mexico, making a thorough investigation of the industry. Both gentlemen arrived at the end of March and it is understood that they are to conduct an investigation into the geological conditions along the Mexican coast for several hundred miles.

Improving Philadelphia's Facilities.—Thanks mainly to the efforts of Mr. J. C. Gabriel, of the Standard Oil Co., work is now proceeding with a view to improving Philadelphia's oil shipping facilities. Mr. Gabriel recently pointed out to the Philadelphia authorities that if they desired to retain the oil shipping trade of the port, it was inevitable that the waterway should be dredged as quickly as possible. Mr. Gabriel stated that to-day the Standard Co. was doing away with the type of oil tanker that had formerly been trading with Point Breeze, and in its place were introducing vessels of deeper draught.

THE FOLLANSBEE FIELD OF WEST VIRGINIA.

THE HISTORY OF ITS DEVELOPMENT.

(Concluded from page 252.)

Many of the wells are put down by contract, the price being about $1 per foot, which includes the casing but not any other part of the rig. If the well proves a producer, the owner purchases the well casing in place at the market price, which does not include the cost of the hauling and the putting into place. The rig necessary for operating the well, such as the derrick and sheds, cables, engine, boiler, tanks, and a large number of accessories must also be purchased by the owner of the well. The operating wells must be given constant attention in order to get the largest possible production from them.

The Follansbee field is considered a very dangerous one by the men working in it, as the wells are so close together. The atmospheric conditions are also such as to augment the danger. The location is in a low river bottom, and a foggy and smoky atmosphere is prevalent, causing the gas to hang low like a fog. Large quantities of gas continually escape from the wells and the oil storage tanks. The usual method of dissipating the gas from the storage tanks is to place a plank cover over the tank and erect a gas chimney on the centre of each tank. These chimneys are made of boards, and are about 12 inches square and from 10 to 12 feet high. The opening, about 2 feet square, in the cover where the flow pipes deliver the oil from the wells, is covered by a trap door or by a gunny sack. The gaseous vapour hangs about almost everywhere in the field, and the utmost caution is necessary to prevent a serious disaster. So it is quite common talk among the more experienced oil men to predict worst accidents than the field has already had, and to constantly advise the exercise of careful judgment. So far, the worst accident was that which occurred on the night of July 4th, when an oil gauger attempted to light a lantern, resulting in the loss of about 500 barrels of oil and the death of the gauger. He had taken what would have been proper precautions in most other fields, but a much greater distance than 30 feet from oil tanks is necessary when using an open flame in the Follansbee field. Lightning has caused damage on several occasions, and but for the prompt action of those caring for the operation of the wells the loss from this cause would have been very much greater. The lightning generally strikes the derricks, doing more or less damage to them, and then follows the flow pipes to the oil tanks, igniting the gas at the top of the chimneys. It is customary in this field, where the wells are large producers, to connect the casing head of the well to the oil tank by means of three 2-inch pipes. The gas burns like a torch at the top of the wooden gas chimneys, and the flame, if not smothered out quickly, would soon fire the woodwork, and the tank with its contents would go up in smoke. On one occasion a force of men rushed to the scene, threw a cable around the chimney, and jerked it with the flame from the tank. In another instance the flame at the chimney top was smothered by throwing a wet blanket over it, the operator climbing a ladder set on top of the roof of the tank house to reach the flame. There was probably danger enough in performing both of these operations, but the quicker the work could be performed the less the danger.

At some of the storage tanks a steam jet has been installed to protect the tanks from fire and lessen the danger to the operator of smothering a flame at the top of the gas chimneys. A steam pipe is run from the boiler to the base of the chimney, and a short nipple used to direct the blast upwards at the centre of the chimney, thus blowing out the flame at the top. Many of the boilers are kept constantly under pressure, as there is generally a demand for steam by some one or more of the engines operated from each boiler, and hence the steam jet can be quickly operated.

Gas is used for fuel, and the firing requires very little attention. By digging a trench or by placing an embankment around the storage tanks the spread of a fire by oil flowing over the ground is prevented to a considerable extent, and hence this precaution is generally taken.

At a distance of half-a-mile or so along the Eldersville Road up the run from the Mahan oil wells there are three or four excellent gas wells, and some other wells are being drilled in the same locality. The McKim gas well, shewn in map No. 2, was probably the largest producer, as it started off at the rate of 6,000,000 feet per day. The location of these wells is specially fortunate as the pipe lines of the Tri-State Gas Co. pass within a few feet of them, and hence only a very small outlay is necessary in order to deliver the gas to the purchaser. At the end of six weeks the McKim well had dropped to 3,500,000 feet per day, but with proper care, the well will no doubt deliver a profitable quantity of gas for a long time to come. The gas pressure at some of the wells was as high as 350 pounds per square inch.

The Tri-State Gas Co. has pipe lines extending from Martinsburg, W.Va., on the south to New Castle., Pa., on the north. This company owns a number of gas wells and also purchases gas from any wells that are available. The mains carry the gas at 140 pounds pressure, and the house service mains carry a pressure of 8 ounces. It is therefore necessary to use both a meter and a pressure regulator at the wells and at each residence and factory. The price paid for gas at the well is 4 cents per thousand feet, and the retail house rate is 25 cents per thousand feet for any excess over a flat rate of $1 per month for each residence. The factory rate is 14 cents per thousand feet, less 2 per cent. for prompt cash payment. The factory rate, however, is for a service pressure of 8 ounces; an extra charge is made where a higher pressure is used, their being a gain of about 33 feet of gas for each pound increase of pressure.

On the Ohio side of the river some good oil wells have been drilled in on the hills a mile or two from the river opposite Follansbee. Several wells have been completed on the hill north of Mingo, thus making it practically certain that the oil sand passes under the river and that there is a large tract worth developing in Ohio.

The Holliday's Cove field is located in Hancock county, north of Brooke county, and is producing about the same amount of oil as that at Follansbee, it is being developed southward into Brooke county toward the Follansbee field, but as yet no direct connection between the fields has been determined.

In conclusion, it might be interesting to note that some years ago the State Geologist of West Virginia asserted that no oil would be found in Brooke county because the formation was not suitable.

The American Oil Market.

New York, Week ended April 24th.

In many of the Eastern fields conditions have been reported more favourable for development work, but the record of completions in the sections east of the Mississippi river for the week shews the same number as previously reported. A comparison of the new production figures is more favourable for the current week, representing a gain of nearly 350 barrels per day. One of the most interesting of recent developments in West Virginia was furnished in the exploitation of the 50-foot pool in the Clay district of Harrison county. The first two completions, says the *Oil, Paint and Drug Reporter*, were good producers and their unusual staying qualities were believed to indicate an extensive stretch of the pay formation. The third well in the district, one and one-half miles from one of the original wells, proved a light pumper. The fourth well drilled during the week, three-quarters of a mile from production, failed to develop a show of oil or gas to the 50-foot sand, but drilling was continued. This result acted as a check on much of the new work in progress there. Brooke county was the scene of more active operations, but the completions were generally light. The bringing in of a producer that started at the rate of 160 barrels a day in the Mannington district of Marion county was among the other noteworthy results of the week in West Virginia. In the south-eastern Ohio record for the week the new production was materially below that formerly noted for the same number of successful wells. Washington county furnished the greatest number of completions, and was far in the lead of new production. The greatest interest was centred in the Scottown development, to which another good producer has been added. The new well was credited with yielding 268 barrels the first twenty-four hours. Keen interest is manifested in the search for new territory in Jefferson county, and one of the completions was reported to be promising for a northern extension of the Osage pool. Considerable experimental work is said to have been outlined in Fairfield and Perry counties in the same section. In the Lima fields of Northwestern Ohio and Indiana development work is reported more active in the Ohio end, and the new production shews a steady increase in many of the districts. Wood county results were especially encouraging. In Indiana a decrease in completions and new production was noted. The more favourable conditions have stimulated field work in Illinois, but the new daily production is nearly 200 barrels below the former total. In the mainstay of production, Crawford and Lawrence counties, there is believed to be much incentive to operations outside of the established districts. Kentucky advices note little of particular interest and operations during the week have been generally of a routine character. The disposition on the part of operators to depart from the established districts has been discouraged by the recent cut in crude prices. The best completion of the week in Kentucky was a 30-barrel well at Slickford. Wayne county. A press despatch from Bartlesville, Okla., has announced a reduction in the price of crude in the Glenn pool and Morris field from 35 to 30 cents a barrel, but our Mid-Continent correspondent writes that the lower figure has not been exceeded for some time in the sales to the principal companies buying crude from these districts. Mid-Continent operators find the outlook of more encouraging portent in the announcement that a leading marketing concern was to build a large refinery on the Gulf coast. The Mid-Continent field will, it is believed, be called upon to supply a considerable portion of its crude for this requirement, and the building of additional pipe lines from the field will, it is hoped, be facilitated.

Refined and Products.—The conditions governing the local market for refined have presented little of new or interesting interest during the week. The export movement failed to approach that of the former period, 11,820,970, against 14,830,400 gallons, but the total for the current week is of fairly average proportions. Of this amount 5,435,000 gallons were carried in bulk. The demand for gas engine consumption has constituted the principal activity in the market for the products and values are apparently steady at recent quotations. The export movement of naphtha involved the unusually large total of 2,873,880 gallons. Of this quantity 1,869,530 gallons were forwarded in bulk to Rouen, France.

CLOSING QUOTATIONS.

Crude at the Wells.

The quotations for oil represented by credit balances were :—

	Week ended April 24. 1908.	Week ended April 24. 1909.
Pennsylvania	$1·78	$1·78
Tiona	1·78	1·78
North Lima	1·04	1·04
South Lima	0·99	0·99
Indiana	0·99	0·99
Illinois, heavy, below 30 deg. ..	0·60	0 60
Kansas and Indian Ter., 32 deg. and above	0 41	0·41
Heavy	0·28	0·28
Humble, Tex.	0·68	0 54
Saratoga	0·65	0·53
Sour Lake, Tex.	0·68	0·53
Jennings, La.	0·67	0·54
Santa Maria	—	1 00
Coalinga	—	0·60
Canadian Oil :—		
Petrolia	1·34	1·44
Oil Springs, less pipeage	1·41	1·51

Refined—For Export.

In cents.	Week ended April 24. S.W. 110 test.	Week ended April 24. W.W. 150 test.
Barrels, cargo .. .. per gal.	8·50	@10·00
Philadelphia	8·45	@ 9·95
Bulk, New York	5·00	@ 6·50
Bulk, Philadelphia	4·95	@ 6·45
Cases, New York	10·90	@12·40
Cases Philadelphia	10 85	@12·35

Refined in Cases—110 Fire Test.

	Week ended April 17. 1909.	Week ended April 24. 1909
3,000 to 10,000	11·05	11·05
1,000 to 3,000	11·10	11·10

Refined—Jobbing Lots.

In barrels. pkgs. included.

	Week ended April 17.	Week ended April 24.
130 fire test, S.W.	11¾	11¾
150 fire test, W.W.	12¼	12¼
In bulk from tanks	9	9
200 fire test	13¼@13¾	13@13¾

Naphtha and Gasolene.

	Week ended April 17.	Week ended April 24.
Naphtha, V. M. and P. deod. ..	11	11
Gasolene, 86 deg.	21¾	21¾

Pennsylvanian Oil Runs from April 15th to April 21st were:—April 15th, 92,460; April 16th and 17th, 136,817; April 18th, 224,694*; April 19 h, 184,311*; April 20th, 267,581*; and April 21st, 188,811*

* Includes Illinois Oil.

The Deliveries of Pennsylvanian Oil from April 16th to April 22nd were:—April 16th, 184,336; April 17th and 18th, 319,521; April 19th, 311,630*; April 20th, 221,263*; April 21st, 241,907; and April 22nd, 221,710*.

* Includes Illinois Oil.

Clearances for the Week.

During the week ended April 23rd and since Jan. 1, the clearances of petroleum, in gallons, from the port of New York, were as follows:—

	Week.	Year.	1908.
Refined	11,820,970	173,856,810	186,872,795
Crude	100,000	10,219,475	7,845,810
Naphtha	2,873,880	10,303,910	3,245,755
Residuum ..	2,250	179,970	623,900

Export Statistics.

The total exports from the port of New York and from the United States have been:—

	Gallons.
From New York, week ended April 23rd ..	15,861,293
Total from New York, from Jan. 1st, 1909 ..	242,029,555
Same period last year	257,009,537
Decrease	14,979,982
From United States, week ended April 23rd	20,507,912
Total from United States, since Jan. 1st, 1909	409,583,755
Same period last year	470,707,825
Decrease	61,124,070

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The "Review" Shipping List.

May 7, 1909.

(The following abbreviations are used in this table:—L. Left; P. Passed; Arr. Arrived; Sp. Spoken; Tr. Trading.)
Anglo-American Co.'s vessels marked thus (□): the Anglo-Saxon Co.'s tankers thus (*): and Messrs. Lane and Macandrew's thus (†).

Vessel.	From.	For.	Latest Date and Position.
ALCHYMIST	Bilbao	Marseilles	Arr. April 30
ALICE ET ISABELLE (Fr. bq.)	—	—	In Port Rouen, April 5, laid up
AMERICAN	Tyne	New York	L. May 4
APPALACHEE □	Sabang	U.S.A.	L. April 24
APSCHERON	Tyne	Batoum	P. Finisterre, May 2
ARAL	—	—	In Tyne, laid up
ARAS	Batoum	Amsterdam	L. April 28
ASHTABULA □	San Pedro	Shanghai	Arr. abt April 22
ASTRAKHAN	Tyne	Philadelphia	P. Butt of Lewis, May 3
AUGUSTA	London	Southend	Arr. May 1, ld. up
AUGUST KORFF	Manchester	Philadelphia	P. O. Hd. Kinsale, April 25
AUREOLE	Port Arthur (Texas)	Antwerp	Sd Norfolk (Va), April 23
BAKU STANDARD	Ely Harbour	Cardiff	Arr. Jan. 24, in Port, May 5
BALAKANI†	Philadelphia	London	L. May 4
BATOUM	Tyne	Port Arthur (Texas)	L. May 5
BAYONNE	St. Louis (Rhone)	Philadelphia	Sd. Algiers, April 29
BEACON LIGHT	Kustendje	Rouen	P. Peniche, May 2
BLOOMFIELD	Manchester	Liverpool	Arr. May 4
BORJOM	Batoum	Alexandria	Arr. April 13, in Port, April 23
BRILLIANT	Tyne	Philadelphia	Arr. May 4
BROADMAYNE	Tongsberg	Tyne	Arr. Feb. 13, in Port, May 3
BULLMOUTH*	Rangoon	Madras	Arr. April 30
BULYSSES*	Singapore	Sabang	Arr. April 29
BURGERMEISTER PETERSEN	Oxelosund	Philadelphia	In Tyne, May 4
BUYO MARU	Yokohama	Muroran	L. Mar. 16
CADILLAC	Philadelphia	Calcutta	P. Del. Break., April 21
CALCUTTA (B. b.) □	San Francisco	Shanghai	L. April 8
CAPTAIN A. F. LUCAS (with S.O. Barge 95)	New York	Rotterdam	P. Nantucket, April 27
CARDIUM*	Singapore	Europe	L. April 30
CARPATHIAN†	Port Arthur	Rotterdam	P. Prawle Pt., May 5
CAUCASIAN†	Newport N'ws	London	L. April 21
CHARLOIS	New York	Amsterdam	L. April 26
CHESAPEAKE □	Sabang & Rotterdam	Nordenhamn	Arr. May 2
CHESTER	Kustendje	Antwerp	At Gibraltar, April 30, in tow
CHEYENNE	Savona	New York	Sd. Algiers, April 22
CITY OF EVERETT (with S.O. Barge 94)	Philadelphia	New York	Arr. April 9, in Port, April 24
CIUDAD DE REUS	Barcelona	New York	Arr May 4
CLAM*	Saitozaki	Singapore	Arr. April 12
CONCH	Rouen	Black Sea	P. Malta, May 6
COWRIE*	Palembang	Freshwater	Arr. April 30
CUYAHOGA □	Tyne	New York	Arr. May 4
CYMBELINE	Portland	Penarth	Arr. April 17, in Port, May 5
CZAR NICOLAI II	Batoum	Hamburg	Off Ushant, May 5
DAGHESTAN	Batoum	Antwerp	Off Ushant, May 5
DAKOTAH □	San Francisco	Moji	L. April 24
DANUBIAN	Newport Nws	Amsterdam	L. May 4
DELAWARE □	Philadelphia	Barrow	P. Del. Break., April 26
DERBENT	Tyne	Batoum	P. Dungeness, May 6
DEUTSCHLAND	Hamburg	New York	P. Lizard, April 25
DIAMANT	New York	Hamburg	Arr. April 18, in Port, May 2
EDWARD DAWSON	Liverpool	Hull	Arr. April 9
ELAX*	Balekpappan	Bombay	Sd. Samboe, April 22
ELISE MARIE	Philadelphia	Swinemunde	L. April 24
EL LOBO	Payta	Campana	Arr. April 25
ENERGIE	Philadelphia	Hamburg	Arr. April 26, in Port, May 2
ERIVAN	Batoum	Dunkirk	P. Tarifa, May 4
ETELKA	Batoum	Bordeaux	S. Algiers, April 27
EUPLECTELA*	Kobe	Balekpappan	Arr. April 29
EXCELSIOR	New York	Copenhagen & Hamburg	At Copenhagen, May 3
FRANCE MARIE (French bq.)	Cette	New York	Arr. April 26
GEESTEMUNDE	Tyne	Philadelphia	P. Dunnet Head, May 4
GENESSE □	New Orleans	Philadelphia	Sd. Port Eads, April 27
GEORGIAN PRINCE	—	—	In Tyne, laid up
GOLDMOUTH*	Samboe	Channel	S. Port Natal, May 1
GUTHEIL	Philadelphia	Havana	L. April 29
HAINAUT (Du. sh.)	Antwerp	New York	P. Prawle Pt., April 1
HARRY WADSWORTH	London	Hull	Arr. May 1
HELIOS	Philadephia	Rouen	Arr. May 4
HERMIONE	Rotterdam	Cardiff	Arr. Mar. 22, in Port, May 5
HESPERUS	New York	Hamburg	Arr. May 2
HOTHAM NEWTON	London	Tees	Arr. April 10, in Port, May 3
HYRCANIA	Tyne	Batoum	P. Gibraltar, April 30
IOANNIS COUTZIS	Cardiff	Piræus	Arr. Mar. 3, in Port, April 17
IROQUOIS □ (towing barge Navahoe)	New York	London	Sp. April 29, 40 N., 65 W.
J. B. AUG. KESSLER	Bombay	Aroe Bay	L. May 1
JAMES BRAND	Cardiff	Port Arthur (Texas)	P. Barry Island, May 2
JOYO MARU	Cardiff	Philadelphia	P. Browhead, April 30
JULES HENRI (French bq.)	Cette	Marseilles	Arr. Mar. 26, in Port, May 1
KURA	Port Arthur (Texas)	Stockholm	L. April 30
LA CAMPINE	Antwerp	Philadelphia	P. Scilly, May 2
LA FLANDRE	Philadelphia	Ghent	P. Del. Break., April 21
LA HESBAYE	Batoum	Antwerp	P. Oitavos, May 1
LACKAWANNA □	Aroe Bay	Barrow	P. Gibraltar, May 2/3
LANSING	—	—	At San Francisco, April 27
LE COQ†	Pera	Cette	L. April 29
LOUTSCH	Calais	Tyne	Arr. April 2, in Port, May 4
LUCERNA	Novorossisk	Brunsbuttel	Off the Wight, May 6
LUCIGEN	—	—	In Tyne, April 20, ld. up
LUCILINE†	Dunkirk	Constant'ple (t.o.)	P. Dover, May 4
LUMEN	Oporto	Tyne	Arr. April 12, in Port, May 4
LUTETIAN†	Pera	Havre and Rouen	At Rouen, May 2
LUX†	New York	Bilbao	L. May 1
MAKKAVEI	—	—	In Port Odessa, April 5
MANHATTAN	Batoum	Tunis	At Malta, May 3/4
MANNHEIM	Tyne	Philadelphia	P. Dunnet Head, April 27
MARGARETHA	Kustendje	Hull	P. Tarifa, May 2
METEOR	Batoum	Vladivostock	Arr. April 11
MEXICAN PRINCE	Tees	Genoa	P. Dover, April 26
MINA BREA	Greenock & Cardiff	Callao & Talara	At La Palmas, April 27
MINHLA	Tyne	Rangoon	Arr. abt. May 5
MIRA	—	—	In Port Blyth, laid up
MUREX*	Karatzu	Singapore	Arr. April 17
NARRAGANSETT	London	New York	Signalled Browhead, May 4
NEW YORK □	Rotterdam	New York	P. Lizard, May 2
NIAGARA	Taku	San Francisco	Arr. April 27

Vessel.	From.	For.	Latest Date and Position
OBERON	Port Arthur (Texas)	Portland	S. Newport News, April 27
OCEAN	New York	Antwerp	Off the Wight, May 1
OILFIELD	Port Arthur (Texas)	—	Sd. Norfolk (Va.), April 29
OKLAHOMA	Philadelphia	Port Arthur (Texas)	Arr. April 22
ORIFLAMME†	Havre	Rouen	L. May 6
OTTAWA ☐	Hull	Philadelphia	Arr. abt. May 4
OURAL	Barcelona	Genoa	L. May 3
PATELLA	Trial Trip	Tyne	Arr. April 28, in Port, May 3
PAUL PAIX	Hartlepool	New York	P. Butt of Lewis, April 30
PAULA	Tyne	Philadelphia	P. Dunnet Head, April 29
PECTAN*	London	Tyne	Arr. April 21
PENNOIL	Tyne	Philadelphia	L. April 21
PETROLEINE	Philadelphia	Rouen	P. Lizard, May 5
PHOEBUS	New York	Antwerp	At New York, April 24
PINNA†	Muroran	Talara	L. April 30
POTOMAC ☐	New York & Trinidad	Buenos Ayres	Arr. April 13
PROGRESSO ARGENTINA (Ar. bq.)	Port Arthur (Texas)	Campana	Sp. Feb. 5 off Fowey Rks., Flda.
PROMETHEUS	Hamburg	New York	P. Prawle Pt., April 27
PRUDENTIA	Port Arthur (Texas)	Liverpool	Sd. Norfolk (Va.), April 22
PURELIGHT	Philadelphia	Hamburg	P. Prawle Pt., May 5
QUEVILLY (Fr. bq.)	New York	Rouen	L. May 3
RENDOVA (Br. bq.)	Seville	New York	Arr. April 23, in Port, April 24
RION	Barry	Batoum	P. Gibraltar, April 23
ROCK LIGHT†	London	Galveston	P. St. Catherine's May 4
ROMANY*	Balekpappan	Hankow	L. April 25
ROTTERDAM	Amsterdam	New York	P. Prawle Pt., May 4
ROUMANIAN†	Newport News	Kustendje	Arr. May 3
RUSSIAN PRINCE	London	Tyne	Arr. May 4
SALAHADJI	Singapore	Balekpappan	L. April 3
SAN CRISTOBAL	—	—	In Pt. Liverpool, May 5
SAN IGNACIO DE LOYOLA (Sp. bq.)	New York	Pasages	L. April 8
SANTA MARIA	San Francisco	Pt. San Luis	Arr. April 14
SANTA RITA	Port San Luis	San Francisco	Arr April 8
SARANAC ☐	Philadelphia	Venice	P. Sagres, May 2
SAXOLEINE	Bordeaux & Dartmouth	New York	P. Prawle Pt., May 5
SCHUYLKILL	Cebu	Boston & New York	At Suez, April 27/28
SEMINOLE ☐	San Francisco	Woosung	Arr. April 24
SERVIAN†	Manchester	Port Arthur (Texas)	P. Fastnet, April 17
SNOWFLAKE	Flushing	Tyne	Arr. April 27, in Port, May 3
SOYO MARU	Lobitos	Yokohama	Arr. Mar. 26
SPONDILUS*	Cardiff	Singapore	P. Barry Island, April 24
STANDARD	Hamburg	Baltimore	P. Dover, April 29
STROMBUS*	Sabang	Europe	Sd, Port Natal, April 20
SULTAN VAN LANGKAT	Balekpappan	Singapore	L. April 8
SUN	Sabine	Philadelphia	Arr. Mar 27
SUNLIGHT (Br. bq.)	Foynes	Cardiff & Galveston	At Cardiff, May 5
SURAM	Blyth	Batoum	Off Ushant, May 3
SUWANEE ☐	Barry	Philadelphia	P. Barry Island, April 30
SVIET	Rouen & Plymouth	Batoum	Arr. April 20
TAMARC ☐	Philadelphia	London	95 miles E. Lizard, May 6
TELENA*	Philadelphia	Calcutta	Arr. May 1
TEREK†	Algiers	London	L. May 4
TEXAS	Port Arthur (Texas)	Philadelphia	L. April 19
TIFLIS	Swansea	Batoum	P. Gibraltar, May 2/3
TIOGA ☐	Philadelphia	Queenstown	P. Del. Break., April 27
TONAWANDA ☐	Hong Kong	San Francisco	Arr. April 23
TRINCULO	Port Arthur	London	L. April 29
TROCAS	Cochin	Aroe Bay	L. April 30
TUSCARORA	Sabang	U.K. or Cont.	Sd Port Natal, April 21
VEDRA	Rotterdam	Tyne	Arr. May 4
VILLE DE DIEPPE (Nor. bq.)	Philadelphia	Rouen	P. Del. Break, April 25
VOLUTE	Singapore	Hong Kong	Arr. May 4
WASHINGTON	Singapore	Europe	At Port Natal, abt. May 4
WASHTENAW	San Francisco	Ancon	S. Port San Luis, Mar. 20
WEEHAWKEN	Barrow	Kustendje	P. Oitaves, April 27
WILLKOMMEN	Rotterdam	New York	Arr May 4
WINNEBAGO	San Francisco	Moji	Arr. May 3

Latest Market Intelligence.

LONDON OIL MARKET.

Supplied by Messrs. Benjamin & Gee, 31, St. Mary Axe, E.C.

May 7th, 1909.

The prices of Refined Petroleum are unaltered as follows:—Russian, 6¼d.; American, 6⅞d.; Water White, 7⅞d.; Roumanian, 7d.

LUBRICATING OILS.

Latest quotations are:—

American pale, £6 10s. to £10 10s.
American dark cylinder, from £8.
American filtered cylinder, from £11 5s.
No. 1 Russian, for Spot, £8 2s. 6d.

TURPENTINE.

There is not much change to report in the price of American Turpentine, the present quotations being for Spot, 26/9; June, 27/-; July/December, 27/9.

LIVERPOOL OIL MARKET.

May 6th.

Refined oils are quiet, and sellers quote 6¾d., for Russian, Galician or Roumanian; and 7¼d. to 8¼d. per gallon for American.

Petroleum Spirit continues at 1s. 0d. to 1s. 2d. per gallon for duty paid lots, at which price there is a good demand ruling.

LATEST AMERICAN PRICES.

New York, May 6th.

Refined, in cases, is steady at 10·90; Standard White, 8·50; Credit balances, 1·73c.

Philadelphia, May 6th.

Standard White is now quoted at 8·45.

RUSSIA. Baku, May 3rd.

The Baku oil market is firm. Crude oil, spot, 22 copecs per pood. Residuals, 22⅛ copecs. Kerosene, in ships, 31 copecs.

BELGIUM.

Antwerp, May 4th.

The petroleum market is firm. Price of Standard White, spot, 22 francs per 100 kilos.

FRANCE. Paris, May 4th.

Illuminating oil is quoted in bulk, in whole tank waggons, 23·50 francs per hectolitre; spirit, 33·75 francs per hectolitre. Special white oil, in barrels or cans, 31·50 francs per hectolitre.

GERMANY.

Hamburg, May 1st.

The kerosene market is unchanged. The price of American Standard White is 7·20 marks per 50 kilos.; Galician, 6·90 marks.

HOLLAND.

Amsterdam, May 3rd.

The petroleum market remains firm. American Standard White, spot, 12·20 florins per 100 kilos.

ROUMANIA. May 3rd.

	Francs.
Crude oil from different fields, including pipe line charges, per 100 kgs.	4·50–4·70
Refined oil, exclusive of taxes, ex. refinery	8·70
Residuals in tank waggons, at refinery	4·35
Paraffin	130·00
Prices for Export.	
Refined oil, f.o.b., per 100 kgs.	7·25–7·75
Benzine, sp. gr. 0·710–0·715, f.o.b.	18·00
,, sp. gr. 0·715–0·720 ,,	15·50
,, sp. gr. 0·730–0·740 ,,	11·00
,, sp. gr. 0·745–0.755 ,,	10·00

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IMPORTS of PETROLEUM into UNITED KINGDOM

Specially prepared for this Journal by the Custom House.

FOR THE WEEK ENDED APRIL 26TH, 1909—

Date.	Port and Importers.	Description.	No. of Gals.	Port Whence.
April	LONDON—			
20	Port of London Authority	Lub.	3,720	Hamburg
20	British Pet. Co. (Rocklight)	Fuel	978,000	Pt. Arthur
20	Anglo-American Oil Co. (Harry Wadsworth)	Gas	798,930	Sabine
21	,,	Lub.	4,000	Philadel.
21	A. Brown and Co.	Lamp	4,000	,,
21	Ragosine and Co.	Lub.	5,040	,,
21	J. Harrison	,,	40	Antwerp
21	T. H. Lee	Lub. Oil and Gr.	530	Hamburg
22	Produce Brokers' Co.	Lub.	5,200	Baltimore
22	,,	,,	4,800	Philadel.
22	Mercantile Lighterage Co.	,,	4,250	,,
22	Page, Son and East	,,	160	Antwerp
22	G. Haller and Co.	,,	200	,,
23	J. Harrison, Ltd.	Lub.Gr.	100	,,
23	European Express Co.	Lub.	40	Boulogne
24	Bowring Petroleum Co. (Augusta)	Lamp	866,650	Philadel.
24	M. Record	Lub.	6,000	Trieste
24	H. Finckler and Co.	Resid.	9,600	,,
24	Port of London Authority	Lub.	1,000	Hamburg
24	Argo Steamship Co.	,,	30	Bremen
26	W. H. J. Alexander	,,	3,690	Philadel.
26	Mordaunt Bros.	Lamp	10,000	Hamburg
26	Page, Son and East	Lub. Oil and Gr.	600	Antwerp
26	J. Harrison	Lub. Gr.	1,250	,,
	LIVERPOOL—			
20	Liverpool Storage Co.	Lub.	1,000	New York
20	J. Light and Son	,,	2,000	,,
20	American Express Co.	,,	120	,,
20	,,	Lub. Gr.	16,800	,,
21	Worthington and Boler	Lub.	7,400	Philadel.
21	Bowring Petroleum Co.	,,	3,620	,,
21	Liverpool Storage Co.	,,	19,200	,,
21	,,	,,	2,200	,,
21	Bramwell, Fern and Co.	,,	3,360	,,
22	American Line	,,	2,000	,,
22	Crew, Levick and Co.	,,	20,680	,,
22	,,	M. Colza	4,120	,,
22	Shropshire Union Railway and Canal Co.	Lub.	3,100	,,
22	W. B. Dick and Co.	,,	10,200	,,
22	D. Currie and Co.	Lub.Gr.	280	Hamburg
23	Meade-King, Robinson & Co.	Lub.	1,600	,,
23/2	(By A.R.) G. B. Taylor	,,	550	New York
26	J. T. Fletcher and Co.	,,	120	Antwerp
26	W. Gibson and Sons	Lamp	2,050	Boston
26	Meade-King, Robinson & Co.	Lub.	10,400	Hamburg
	BRISTOL—			
22	Pickford's	Lub. Oil and Paste	530	,,
22	Colhurst and Harding	Lub.	290	New York
April				
22	J. and R. Bush	Lub.	29,600	,,
22	,,	L.Resid.	600	,,
23	Pickford's, Ltd.	Lub.	240	Antwerp
23	E. Stock and Sons	,,	3,040	Hamburg
23	W. G. Clarke	,,	800	Antwerp
24	H. R. James and Sons	,,	32,260	New York
24	,,	M.Colza	12,000	,,
26	H. Pritchard and Co.	Lub.	1,260	,,
26	Ford and Canning	,,	400	,,
26	J. and R. Bush	,,	40,560	,,
	GRIMSBY—			
20	J. Sutcliffe and Son	,,	240	Rotterdam
23	,,	,,	840	Antwerp
24	,,	,,	60	Hamburg
	HARWICH—			
21	D. Howard	,,	160	Antwerp
21	,,	,,	70	,,
21	,,	,,	170	,,
	WEST HARTLEPOOL—			
20	W. Hartlep'l Steam Nav. Co.	,,	240	Hamburg
	HULL—			
21	W. Gilyott and Co.	,,	66,600	New York
21	T. Wilson, Sons and Co.	,,	108,960	,,
21	,,	,,	1,280	Reval
21	,,	,,	1,880	Hamburg
21	,,	,,	640	Antwerp
22	,,	,,	880	Hamburg
	MANCHESTER—			
20	Liverpool Storage Co,	,,	36,800	New York
20	Produce Brokers' Co.	,,	2,400	,,
20	Anglo-American Oil Co. (Aug. Korff)	,,	672,220	Philadel.
20	Produce Exchange	,,	3,140	,,
22	Meade-King, Robinson & Co.	,,	10,400	Hamburg
22	D. Currie and Co.	,,	480	,,
	NEWCASTLE—			
24	Tyne-Tees Steamship Co.	,,	3,560	Antwerp
	SOUTHAMPTON—			
22	White Star Line	,,	160	New York
	SWANSEA—			
22	Burgess and Co.	,,	90	Hamburg
	ABERDEEN—			
24	R. C. Reid and Co.	Lamp	2,000	,,
24	,,	Lub.	130	,,
	DUNDEE—			
22	D. Alexander and Sons	,,	6,000	,,
	GLASGOW—			
20	Clyde Shipping Co.	Lub. Gr.	290	Antwerp
	GRANGEMOUTH—			
20	J. Currie and Co.	Lub.	3,800	Hamburg

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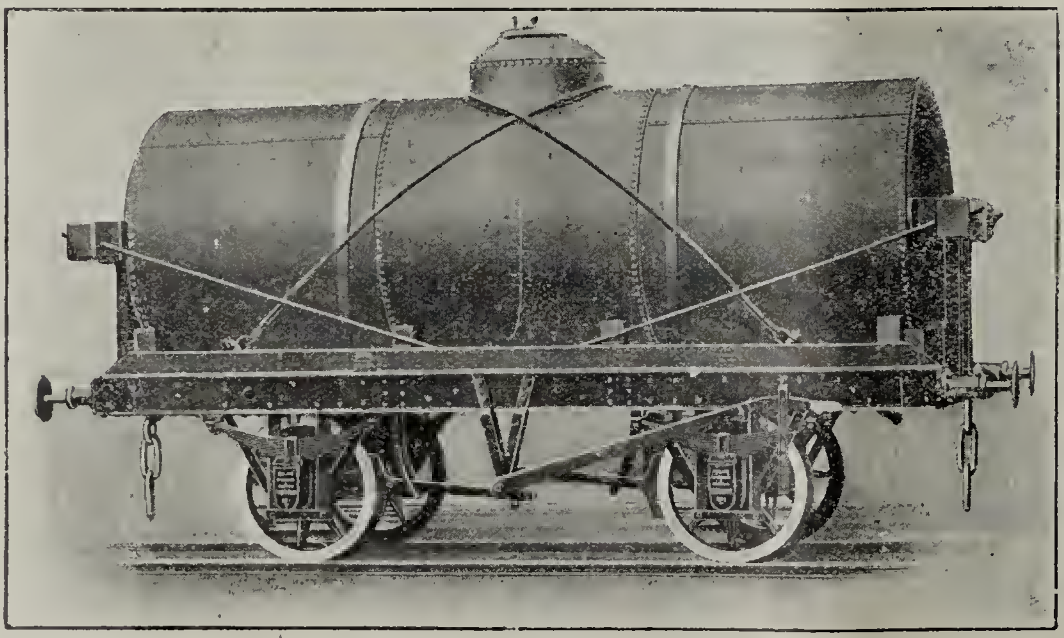

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IMPORTS.—(*Concluded*).

Date.	Port and Importer.	Description.	No. of Galls.	Port Whence.
April	GRANGEMOUTH—			
20	J. Currie and Co.	L.Paste	180	Hamburg
20	W. Graham-Yooll and Co.	Lamp	2,000	,,
	LEITH—			
23	W. Graham-Yooll and Co.	,,	2,130	,,
22	,,	,,	4,100	,,
22	G. Gibson and Co.	Lub.	110	Antwerp
22	J. Currie and Co.	,,	1,200	Hamburg
	DUBLIN—			
23	Alliance and Dublin Consumers Gas Co. (J. Brand)	Gas	1,330,000	Baltimore
	LIMERICK—(by qy.)			
13/4	British Pet. Co. (Sunlight)	Lamp	530,000	Pt. Arthur
			5,733,470	
	Deduct to Correct—			
	LONDON—			
3/4	H. P. Wheatley and Co. (Hotham Newton)	Lub.	810,000	Batoum
	Total for the Week		4,923,470	

FOR THE WEEK ENDED 3RD MAY, 1909—

Date.	Port and Importers.	Description.	No. of Galls.	Port Whence.
April	LONDON—			
27	Schlieman's Oil Works	Lub.	1,050	Hamburg
27	,,	Lub. Gr.	1,870	,,
27	Port of London Authority	Lub.	3,600	,,
27	British and Foreign Wharf	,,	2,350	Antwerp
27	Port of London Authority	,,	270	,,
27	Grindley and Co.	,,	3,960	New York
27	Woolley, Airly and Co.	,,	90	,,
27	Anglo-American Oil Co. (Narragansett)	Lamp	2,604,230	,,
27	,, ,,	Lub.	426,070	,,
28	Produce Brokers' Co.	,,	7,120	,,
28	Asiatic Petroleum Co.	Benzine	5,000	Rotterdam
29	Mercantile Lighterage Co.	Lub.	250	New York
29	Fielder, Hickman and Co.	,,	3,840	,,
29	,,	Lub. Gr.	5,400	,,
29	Anglo-American Oil Co.	Lub.	34,000	,,
29	T. H. Lee	Lub.Gr.	50	Hamburg
29	Schlieman's Oil Works	Lub.	4,150	,,
29	H. P. Wheatley and Co. (Neerlandia)	Lamp	385,000	,,
29	Page, Son and East	Lub.Gr.	120	Antwerp
29	Port of London Authority	Lub.	1,000	New York
30	H. and G. Dutfield	Lub. Gr.	600	,,
30	Port of London Authority	Lub.	240	,,
May				
1	Anglo-American Oil Co.	,,	227,200	,,
1	Van Dam and Co.	Tar Oil	2,470	Rotterdam
3	Argo Steam Ship Co.	Lub.	80	Bremen
3	T. H. Lee	Lub. Gr.	50	Hamburg
3	Leach and Co.	Lub. Oil and Gr.	260	Ghent
3	J. Harrison	Lub. Gr.	80	Antwerp
3	Page, Son and East	Lub.	200	,,
April	LIVERPOOL—			
28	Worthington and Boler	,,	3,200	Philadel.
29	Crew, Levick and Co.	,,	13,650	,,
29	,,	Lamp	8,190	,,
29	American Line	Lub.	1,800	,,
29	Bowring Petroleum Co.	,,	830	,,
29	G. B. Taylor	,,	12,000	,,
25	E. Harrison and Co.	,,	21,000	Baltimore
29	Meade-King, Robinson & Co.	,,	10,000	Philadel.
29	A. Hopps and Sons	,,	2,570	Baltimore
29	W. B. Dick and Co.	,,	20,470	Philadel.
29	,,	,,	10,270	Baltimore
29	Meade-King, Robinson & Co.	,,	13,000	,,
29	,,	Lub. Gr.	2,600	,,
29	,,	Lub.	10,400	Hamburg
29	D. Currie and Co.	,,	3,460	,,
30	J. Light and Son	,,	2,600	Baltimore
30	Shropshire Union Railway	Lub.	830	Philadel.
May				
1	Geo. B. Taylor	,,	480	New York
1	Ismay, Imrie and Co.	,,	360	,,
3	Vacuum Oil Co.	,,	9,280	,,
3	Valvoline Oil Co.	,,	13,120	,,
3	,,	,,	18,860	,,
3	R. Crooks and Co.	Lub.Gr.	290	,,
3	G. B. Taylor	Lub.	12,400	,,
3	Colby and Co.	,,	480	,,
3	Cunard Steamship Co.	,,	2,020	,,
3	Crew, Levick and Co.	,,	800	Philadel.
3	C. C. Wakefield	Lub.Gr.	500	Antwerp
3	C. W. Field	Lub.	210	,,
3	Meade-King, Robinson & Co.	,,	10,400	Hamburg
3	R. Davidson and Co.	,,	260	,,
3	Pickfords	Lub. Oil and Paste	620	
April	BRISTOL—			
28	H. Matthews and Co.	Lub. Oil and Paste	310	Hamburg
28	Pickford's, Ltd.	Lub.	700	,,
28	,,	Lub.Gr.	1,800	New York
28	J. and R. Bush	Lub.	5,200	,,
	GOOLE—			
29	Goole S.S. Co.	,,	980	Hamburg
	GLOUCESTER—			
30	Bristol S. Navigation Co.	,,	800	,,
	HARWICH—			
27	D. Howard	,,	200	Antwerp
27	,,	,,	80	,,
28	,,	,,	60	,,
29	,,	,,	180	,,
	HULL—			
27	G. Hardy and Co.	,,	260	,,
27	T. Wilson, Sons and Co.	,,	780	,,
29	,,	,,	800	Bergen
29	Wilsons and N.E. Co.	,,	10,600	Hamburg
30	T. Wilson, Sons and Co.	,,	62,600	New York
May				
1	W. Gilyott and Co.	,,	5,000	,,
April	MANCHESTER—			
27	D. Currie and Co.	,,	600	Hamburg
29	J. T. Fletcher and Co.	,,	80	Antwerp
30	Bramwell, Fern and Co.	,,	25,890	Philadel.
30	Manchester Liners, Ltd.	,,	4,400	,,
May				
1	Meade-King, Robinson & Co. (Bloomfield)	Gas	1,527,270	Pt. Arthur
3	,,	Lub.	10,400	Hamburg
3	Liverpool Storage Co.	,,	9,030	New York
3	C. H. Morton and Sons	,,	1,600	Philadel.
3	Meade-King, Robinson & Co.	,,	17,360	,,
3	Bramwell, Fern and Co.	,,	1,310	New York
3	Worthington and Boler	,,	8,900	Philadel.
3	G. B. Taylor	,,	79,280	,,
3	,,	,,	34,400	New York
April	NEWCASTLE—			
27	Tyne-Tees S.S. Co.	,,	2,280	Hamburg
27	,,	Lamp	2,000	,,
	DUNDEE—			
29	D. Alexander and Sons	Lub.	2,000	,,
	GLASGOW—			
27	Anchor Line	,,	40,020	New York
27	Donaldson Bros.	,,	2,600	Baltimore
29	Burrell and Son	L.Resid.	2,000	Trieste
	GRANGEMOUTH—			
27	W. Graham-Yooll and Co.	Lamp	3,400	Hamburg
27	J. Currie and Co.	,,	800	,,
27	,,	Lub.	4,400	,,
27	W. Graham-Yooll and Co.	Lamp	2,000	,,
	LEITH—			
27	G. Gibson and Co.	Lub.	240	Antwerp
29	,,	,,	8,280	,,
May				
1	J. Currie and Co.	,,	200	Hamburg
1	W. Graham-Yooll and Co.	Lamp	2,180	,,
April	DUBLIN—			
29	Palgrave, Murphy and Co.	,,	5,900	N. Orleans
			5,816,720	
	Deduct to correct—			
	HULL—			
17/4	T. Wilson, Sons and Co.	Lub.	66,600	New York
7/4	,,	,,	78,520	,,
	MANCHESTER—			
16/3	Anglo-American Oil Co. (Genesee)	Gas	41,980	Sabine
20/4	,, (Aug. Korff)	Lub.	3,140	Philadel.
10/4	British Pet. Co. (Servian)	,,	9,200	Pt. Arthur
2/4	Anglo-American Oil Co. (Delaware)	Lamp	9,180	Philadel.
	SUNDERLAND—			
5/4	Anglo-American Oil Co. (Balakani)	,,	11,790	Sabine
	Total for Week		5,596,310	
	Total for the Fortnight		10,519,780	

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Lest we Forget.—No firm can become truly great without judicious advertising. Shall we send you the REVIEW's rates?

The Petroleum Review.

By PAUL DVORKOVITZ.

Vol. XX. *(New Series.)* May 22nd, 1909. No. 451

THE PETROLEUM REVIEW:

The ANNUAL SUBSCRIPTION for both English and Foreign readers is 26s., including Postage. Single Copies may be had at the offices at 1s.

The Editor would esteem it a favour if readers, when communicating with the various firms advertising in our pages, would mention the "Review."

Contributions upon items of interest are always welcomed from subscribers, but in each case these should be accompanied with the name and address of the sender, not necessarily for publication.

Editorial Notes.

The Petroleum Exhibit at the Imperial International Exhibition.

Our readers will be greatly interested in learning that the Petroleum Institute—the principal of which is Dr. Paul Dvorkovitz—has arranged a petroleum exhibit at the Imperial International Exhibition which opened on Thursday at Shepherd's Bush, London, W. Though the time in which the nucleus for the exhibit has been drawn together has been short, the exhibit is one which will be in every way worthy of the industry. The one great aim is that it shall be thoroughly representative of the great petroleum industry, and those individuals or firms who have not already been approached to send any articles of interest—models, charts, etc.—will kindly take the will for the deed, and communicate with Dr. Dvorkovitz without delay. The Petroleum Institute's exhibit will be found in a prominent position in the Machinery Hall.

England's Oil Trade with America.

The extent to which England's oil trade with America is growing is set forth in an official tabulated statement we have just received. As is known, the American fiscal year dates from June, and so taking into consideration the exports for March last, we are able to find from the nine months' statistics how things are moving. America's total petroleum exports are steadily increasing, as may be seen from the fact that during the nine months she has exported 1,037,000,000 gallons of refined oils, as compared with 945,000,000 gallons for the corresponding period of 1908, and 840,000,000 gallons for the nine months of the 1907 fiscal year. Of this quantity England has taken in illuminating oil, naphthas and other light products, 178,000,000 gallons for the past nine months, as compared with 160,000,000 gallons for the three quarters of the 1908 fiscal year, and 140,000,000 gallons for 1907. Thus England is by far America's greatest consumer, Germany occupying the second place. In lubricating and heavy paraffin oils, the United Kingdom has taken from America during the past nine months 33,000,000 gallons, which quantity, though being somewhat above the figures for 1907, is 5,000,000 gallons below the record for the nine months of the 1908 fiscal year. The Chinese Empire and the British East Indies are now large American customers for refined oils.

The late Mr. Henry H. Rogers.

The petroleum industry is made all the poorer by the great loss it has sustained in the death of Mr. Henry H. Rogers, a gentleman who, together with Mr. Archbold, has been the chief controller of the Standard Oil Company at 26, Broadway, New York, since the virtual retirement of Mr. J. D. Rockefeller, some years ago. Mr. Rogers was one of the founders of the great concern, and, during his life, he had the pleasure of reaping that which he had sewn in his earlier days. One of the greatest authorities upon oil, he was a veritable Napoleon of business, and the effect which his labour had upon the growth of the Standard Oil Company, is clearly seen from the fact that Mr. Rockefeller himself has publicly admitted that to our deceased friend, he owed an ever undischargable debt of gratitude. Though of late, Mr. Rogers has not been blessed with the best of health, still he stuck to the business he had done so much to develop, and the call of Death found him in harness. We are sure our readers in all parts of the world will echo our sincere sentiments of deep regret at the removal of a gentleman so well known and so highly respected throughout the world of oil.

More Sittings of the Petroleum Committee.

Through the courtesy of Major Crozier, the Secretary of the Petroleum Committee, we learn that at the most recent sitting, several witnesses were called before the members, and additional evidence taken. If the mission of the Committee were not so important, and the necessity for serious evidence to be given so imperative, one might be inclined to smile at many of the statements made. For instance, we notice that the Chief Inspector under the Petroleum Acts for the City of Glasgow is reported to have stated that he thought that under certain circumstances the officers of the local authorities should have the power to seize petroleum spirit. This is, without doubt, a very novel idea, yet it necessitates explanation. In fact, without any explanation, the suggestion is meaningless. We have previously urged that evidence should be taken from gentlemen directly interested in the petroleum spirit trade, for their views would naturally be of real value. The evidence of other witnesses might also be criticised, and the atmosphere considerably cleared. At any rate, the Committee would then be able to proceed in a business-like way with their mission, and their ultimate findings based upon the evidence taken might be of some advantage to all concerned.

THE TIN PLATE MARKET.

Messrs. Norton, Owen & Co., of 4, Bishopsgate Street Within, London, E.C., report under date May 20th, 1909, as follows:—

Prices have advanced 1½d. to 3d. per box in the last fortnight and are being maintained. The inquiry for oil sizes continues fairly good, with buyers at 12s. for 1C 18¾ by 14, and 17s. for 1C 20 by 10 f.o.b. Wales, but most makers are holding out for 1½d. to 3d. per box more. Shipments of tin plates have been exceptionally heavy of late, and stocks awaiting shipment in warehouses have been largely depleted. Below we give particulars of the exports for April and the first four months of this year, which shew that the general volume of business is satisfactory, although makers complain that prices are unremunerative. We may add that the tin plate trade in the United States appears to be fully engaged with its home trade, as the *The Iron Age*, dated Pittsburg, U.S., May 6th, reports:—

"The leading tin plate mills are operating actively—practically full capacity—and receiving heavy specifications against contracts placed some time ago by the canning interests and other consumers. It is believed that in point of tonnage the tin plate trade this year will be the heaviest ever known."

We make prices of oil sizes to-day:—

1C 18¾ × 14	124 sheets	110 lbs.	12/- to 12/1½ per box.
1C 19¼ × 14	120 ,,	110 ,,	12/- ,, 12/1½ ,,
1C 20 × 10	225 ,,	156 ,,	17/- ,, 17/3 ,,

F.o.b. Wales. Tin lining and iron hooping extra.

EXPORTS OF TIN PLATES.

	April 1908. Tons	April 1909. Tons	Jan.-April 1908. Tons	Jan.-April 1909. Tons
Russia	904	150	3,939	3,607
Germany	2,622	2,742	10,061	9,098
Holland ..	2,601	2,280	8,443	9,156
Belgium	953	1,208	3,179	3,459
France	2,691	1,572	9,499	6,251
Portugal	1,229	2,308	3,735	4,311
United States ..	7,426	6,401	22,030	18,974
British East Indies	3,965	4,408	16,283	18,068
Australia	1,565	1,484	7,257	6,763
Canada	476	1,233	4,108	9,286
Other countries ..	11,352	13,245	47,288	47,850
Total .. Tons	35,784	37,031	135,822	136,823

EXPORTS OF AMERICAN PARAFFIN WAX

The exports of paraffin wax from America during March were as under (in pounds), comparisons with the exports of the corresponding month in 1908 also being given:—

Exported to—	1908.	1909.
United Kingdom..	10,297,212	6,540,725
Belgium	76,702	38,564
France	240	45,003
Germany	482,601	160,623
Italy	642,718	657,463
Netherlands	71,310	230,919
Other European Countries ..	137,646	183,827
Central American States and British Honduras	63,933	154,812
Mexico	515,959	1,917,591
South America	31,417	30,241
Japan	1,504,745	668,472
British Australasia	6,842	—
Other Asia and Oceanica ..	1,491,731	11,702
British Africa	1,038	59,184
All Other African Countries ..	626,321	—
Other Countries	2,837	1,506

LONDON OIL SHARE MARKET.

Friday, May 21st, 1909.

Although the activity evinced by the Oil Share Group on the London Stock Exchange during the earlier part of the period which has elapsed since our last issue has not been maintained, the tone continues very firm with a decided tendency toward a higher range of value in the leading issues.

Shell Transport Ordinary shew an improvement of 3s. 3d. per share at 60s 3d. to 61s. 3d., while Spies, Lobitos Oil and Pacific Oilfields are all 3d. higher at 12s. to 12s. 6d., 25s. 3d. to 26s. 3d., and 24s. 3d. to 25s. 3d. respectively. Burmah Ordinary and Californian Oilfields at $5\frac{1}{16}$-$5\frac{3}{16}$ and $5\frac{1}{4}$-$5\frac{3}{8}$ both have the dividends deducted, the former being also ex-bonus, and Commonwealth Debentures are two points higher at 79-83.

◆

IMPROVEMENTS IN THE BUILDING OF OIL TANKERS.

An English patent has been recently granted to Mr. James Edward Scott, shipbuilder of Greenock, for an invention which relates to improvements in the construction of vessels, and is particularly applicable to oil tankers. Mr. Scott's first patent in this connection was granted in 1871, and was carried out by fitting the transverse tie frames and their beams at the upper deck constructed of a new section of double bulb tees and double bulk angles.

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THE INDIAN PETROLEUM MARKET.

(*Crowded out of page* 313.)

Bombay, May. 1st.

The petroleum market is strong. The following are the current prices of the Standard Oil Co. of New York:

		Rs.	a.	p.
Snowflake Brand, 150 deg., American	(per case)	6	4	2
White Rose, 150 deg. ,,	,,	6	4	2
Chester Brand, 76 deg. Abel	,,	4	12	2
Devoe's Brilliant	,,	4	12	2
Monkey Brand, 76 deg. Abel	,,	4	6	2
Elephant Brand, 125 deg. (bulk in tins)	(per 2 tins)	3	15	0
Elephant Brand, 125 deg. (bulk without tins) (per 8 Imperial gallons)		3	5	0

The following are the current prices of the Asiatic Petroleum Co., Ltd.:—

		Rs.	a.	p.
Swan Brand, bulk loose..	(per unit)	2	15	0
Swan Brand, new tins	(per pair)	3	9	0
Ship Brand, bulk loose	(per unit)	3	5	0
Ship Brand, new tins	(per pair)	3	15	0
Rising Sun Brand, bulk loose	,,	3	7	0
Rising Sun Brand, new tins	,,	4	1	0
Anchor Cases	(per case)	4	6	0
Silver Light 150 deg. cases, ...	(per case)	5	4	0

The prices of the Burma Oil Co.'s productions are as under:—

		Rs.	a.	p.
Kerosene, Victoria	(per 2 tins)	3	8	0
Kerosene, Victoria	(per 8 gallons)	2	14	0
Kerosene, Chukker	(per 2 tins)	3	15	0
Kerosene, Chukker	(per 8 gallons)	3	5	0
Burmah Wax	(per pound)	0	4	0
Burmah Candles	,,	0	5	0

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An Important Committee.—The committee appointed by the Minister of Industry and Commerce for studying the question of the closure of waters in petroleum districts, have begun their work, under the chairmanship of Prof. Mrazec. The committee draw the attention of petroleum producers to the following points: (1) To avoid as much as possible sudden sinking of the superior strata of the deposits, as this is the cause of opening of waters and consequently endangering the petroliferous districts, and for this purpose the committee suggest that the distance between the wells should be not less than 80 and even 100 metres; (2) To utilise the yellow plastic stratum of marle characteristic of the petroliferous region and situated at 5 to 6 metres above the deposits; (3) The fractional closure of the salt waters laying above the deposits.

Death of Mr. Henry H. Rogers of the Standard Oil Company

. . . THE CAREER OF A TRULY GREAT MAN . . .

It is with deep and sincere regret that we have to announce the death of Mr. Henry H. Rogers, one of the vice-presidents of the Standard Oil Co., a gentleman who was well known and as highly respected throughout the petroleum industry in both hemispheres.

Mr. Rogers, whose very life was a monument of energy, uprightness and perseverance, was stricken with illness some two years ago, and from that time until his decease on Wednesday last, he was not in the best of health, yet he still attended to his responsible duties as one of the heads of the Standard Oil Co.

Born at Fairhaven, in Massachusetts in 1840, he came of a typical yet very poor American family, and strange as it may seem in the light of later day success, he began life as a newsboy. Then he took to driving a van for a few shillings per week, and afterwards became the village station baggage master. In the days of the first petroleum developments, Mr. Rogers took to himself a wife, and possessed with such knowledge of petroleum as he had secured by reading the newspapers, he started out upon his long and eventful journey in life to the oil regions. For six years he remained at Oil Creek, and in conjunction with a Mr. Ellis of Fairhaven, he engaged in the petroleum producing and refining business.

In 1867 Mr. Rogers went with the Pennsylvania Salt Company, of Natrona, which concern had, in connection with their chemical works, one of the largest refineries on the Allegheny river. The following year he went to New York as an associate with the late Charles Pratt and remained a partner with Mr. Pratt until 1874, when the alliance of the leading refineries of Cleveland, Pittsburg, Philadelphia and New York was made under the name of the Standard Oil Company. Later, when the Standard Company as is known to-day was formed, Mr. Rogers, because of his practical experience, was made the chairman of its manufacturing committee. In a short time he was made a trustee and afterwards vice-president, and until the time of his death he was a well-known and prominent factor in the affairs of the Standard, his immediate connection being with the pipe lines gathering system. Outside his regular business, he held positions of trust in a number of the largest financial institutions in the country, and only a few weeks ago he celebrated the building of the Virginia Railway—an enterprise which he personally initiated and carried through at a cost of £8,000,000, to which he was the chief subscriber.

His experience in the various branches of the petroleum industry has been more extended in detail than that of any other person, and he was probably the most prosperous of the old timers of the oil regions, and while he simply claimed that he had been most signally blessed through good luck, his friends well knew that his good habits, industry, intelligence and persistency, were entitled to the credit of his business success.

A man of remarkable energy and tenacity of purpose, attended with a lofty sense of justice, Mr. Rogers was not easily swerved from a fixed course. Yielding to none in the quality of exactitude, he compelled in others a strict observance of the amenities to which he was entitled. Always considerate of others, he did not permit his success in life to interfere with his duties to humanity. His friends and acquaintances observed no change in his demeanour toward them as a result of his social eminence and business prominence. He was the same while directing the movements of an industrial army of 30,000 men from Broadway as when he was an humble clerk.

Like his honoured chief—Mr. J. D. Rockefeller, Mr. Rogers had a large heart, giving freely to those who, through no fault of their own, had fallen by the way. He was particularly generous to his native town—Fairhaven—for upon it he showered £800,000, the gifts including a town hall, a library and a hospital.

In spite of the great calls upon his time, Mr. Henry H. Rogers devoted much attention to commercial enterprizes other than the Standard. He was president of the Amalgamated Copper Co., of the National Transit Co., of the National Fuel Gas Co., vice-president and Trustee of the Anaconda Copper Mining Co., director of the United States Steel Corporation, and of several other vast concerns.

In 1897 Mr. Rogers, at the behest of the representative of the Danish Government, brought to the attention of the Federal Government the fact that Denmark desired to sell to the States the Danish West Indies. The outbreak of the Spanish war stopped the negotiations that time, and this brief connection of Mr. Rogers with the matter was made the basis of sensational stories, which represented him as "owner and controller of the United States Senate."

Mr. Henry H. Rogers was the central figure of T. W. Lawson's "Frenzied Finance," which excited so much interest in the United States a year or two ago.

Mr. Rogers leaves a son, three daughters, and grandchildren to share his enormous wealth.

Mr. J. D. Rockefeller, upon hearing of Mr. Roger's death, said :—"Often I have implored him, with tears in my eyes, to work less, but he was so strong and so powerful that no one could persuade him to cast aside his burdens."

AN APPARATUS FOR REGISTERING THE USE OF STEAM IN FACTORIES.

A SIMPLE YET EFFECTIVE CONTRIVANCE.

It is of the greatest importance for every factory to be able to judge the quantity of steam used in its machinery. Unfortunately this has not been possible in the past because of lack of a proper steam gauge. The difficulty, however, has now been surmounted by an apparatus, and it has for some time been used in many factories with the greatest satisfaction. The construction of the gauge, which is here illustrated, is very simple, and has for its basis the following formula:

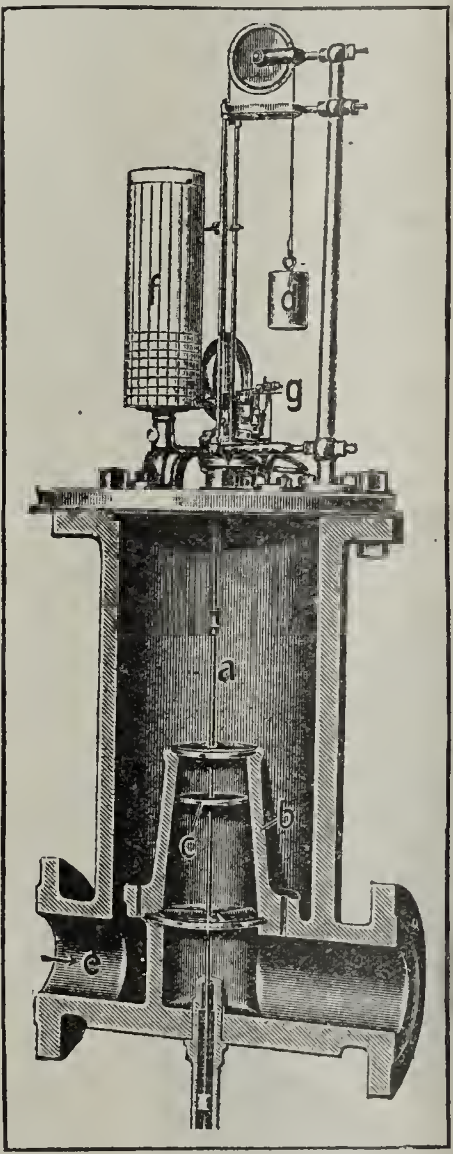
$$G = F.\ U.\ Y.$$

G. being the total quantity in kilogrammes of steam passing through the gauge in one second.

F. The cross-section of the passage in square metres.

U. The velocity of the steam in metres per second.

Y. The weight of one cubic metre of steam in kilogrammes of the average pressure p.



The steam gauge is operated in a manner easily seen from the sketch. The steam enters into *e* and passes through the hollow cone *b* and pushes the plate *c* which is held by the weight *d* upwards to a certain position corresponding to the pressure of the steam. As soon as this latter changes, the position of the plate correspondingly alters. The changes in the position of the plate *c* are transmitted by means of a specially adapted pin to the drum *f* moved by clockwork and registered in form of diagram *g*.

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SURAKHANY PETROLEUM.

In the Surakhany district of Baku, which is close to the Balakhany-Saboontchi districts and where petroleum gas has been produced since time immemorial, a large quantity of crude oil is now being obtained. The oil in the upper strata has hitherto been practically white, but lately deeper borings having been made, and the crude oil produced has been of a darker colour and of a heavier quality. At present the oil so produced resembles a mixture of the white oil received from the upper strata and the crude oil from the Balakhany-Saboontchi districts. The specific gravity of the oil varies from 0·7821 to 0·7883 and contains on an average about three per cent. of fractions up to 100° C.; and from 100 to 130° C., 25 to 35 per cent., with a specific gravity of 0·760. By adding the heavier fractions, a kerosene is received with a specific gravity of between 0·795 – 0·800, and with a flash point of 85° F.

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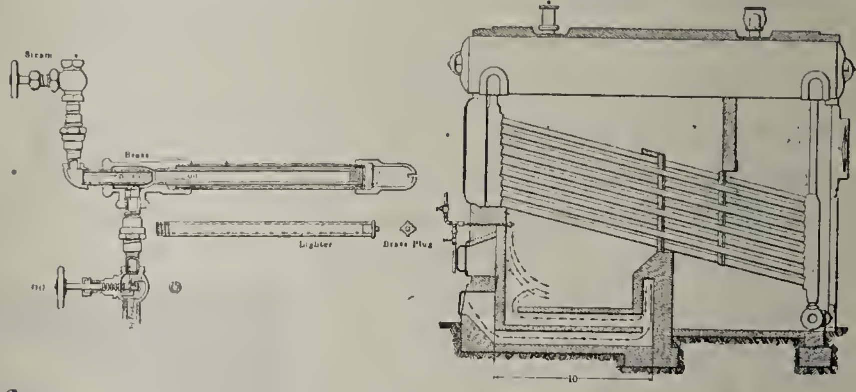
THE WITT CRUDE OIL BURNING INSTALLATION.

The accompanying illustration, which is reprinted from the American *Engineering Journal*, shews an arrangement of a boiler furnace fitted with a Witt crude-oil burner which protects the flues of the boiler from the direct flame, preheats the air supply and produces a noiseless fire. The air is admitted through flues below the fire-box leading to the bridge and returning directly under the oil burner. The burner is placed directly under the tubes, but since the heated air enters at the bottom of the combustion chamber, the flame is not local but the fire is distributed throughout the furnace.



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PRODUCTION OF ENGLISH COMPANIES IN RUSSIA.

Baku Russian Petroleum Co., Ltd.—The production for the week ended 8th May was 207,700 poods, or 3,348 tons; and for the week ended 15th May was 194,550 poods, or 3,316 tons.

Russian Petroleum and Liquid Fuel Co., Ltd.—The production for the week ended 8th May was 198,000 poods, or 3,192 tons; and for the week ended 15th May was 212,000 poods, or 3,418 tons.

Spies Petroleum Co., Ltd.—The production for the week ended 9th May was 303,355 poods, or about 4,893 tons. The total production for year to 9th May was 4,250,920 poods, or about 68,563 tons. The total production for the corresponding period last year was 4,557,300 poods, or about 73,505 tons. The output for the week ended 16th May was 300,000 poods, or 4,839 tons. The total production for year to 16th May was 4,550,920 poods, or about 73,402 tons. The total production for the corresponding period last year was 4,715,455 poods, or about 76,056 tons.

The European Petroleum Co., Ltd.—The production for the week ended 9th May was 146,091 poods, or 2,355 tons; and for the week ended 16th May was 141,472 poods, or 2,281 tons.

Recent Developments in the Japanese Petroleum Industry.

CONSULAR REPORT.

The American Vice-Consul-General at Yokohama, in a recent report concerning the development of the petroleum industry of Japan, says that the "Japan Financial and Economic Monthly" gives the following statistics concerning the petroleum industry of Japan, compared with that of the United States and Russia, as related to one of the staff of that journal by Mr. Watanake Tokichi, the managing director of the largest petroleum company in Japan:—

The world's output of petroleum last year amounted to 234,270,000 barrels, of which the United States produced 165,870,000 barrels, occupying the foremost position, while Russia produced 40,800,000 barrels. Japan occupies only the seventh rank, her output being 470,000 barrels, having increased from 250,000 in 1907. But the domestic product is far from being sufficient to meet the home demand, and therefore it is a matter of prime necessity at present to import a large quantity of petroleum products. According to official returns, the imports last year amounted to 1,010,000 cans of illuminating oil, valued at $7,131,360, and 9,670,000 cans of crude oil at $298,800. In fact, petroleum forms an important item in the list of imported articles, hence the importance of developing the petroleum industry so as to meet the home demand, and, if possible, to make exports to foreign countries. The Hoden Oil Co. was established in February, 1893, in Nagaoka, the province of Echigo, with a capital of $7,470. In those days the petroleum industry was regarded in Japan as a sort of speculation, and many business men considered it undignified to engage in such an enterprise, but at present the company has a capital of 11,650 yen ($5,801,700), making 40 per cent. dividend, while the shares are worth three times as much.

An Up-to-Date View in the Oil Fields.

During the 16 years in which the company has been in business its capital has increased by 780 times, the reason being its absorption of 127 petty companies and guilds, the total capital of which was $11,175,000. The advantage of combination is manifest in any business, but it is particularly the case with the petroleum industry. We did not experience any difficulty in bringing about the amalgamation of small companies, as the desire for amalgamation was so keen that no written contract was made, a verbal promise being quite sufficient. When the company was founded the number of oil wells was only two, but at present we count 1,359. The average rate of dividend for 16 years (31 terms) is 36·4 per cent.

Since the oil industry in Echigo was commenced, 23 years have elapsed, during which time 30 per cent. of the domestic want was supplied, while the output of last year met fully 40 per cent.; and during the first half of the year 50 per cent. of the home demand was supplied.

Statistics of the United States and Russia shew that the former has bored to the depth of 3,000 feet and the latter to that of 3,500 feet, while the deepest well in Japan is only 2,040 feet. The outlook for new oil fields is regarded as very hopeful. When all these circumstances are taken into consideration, the output for next year will supply 70 per cent. of the home demand, and for the year after next the demand for refined oil, amounting to 10,000,000 cases, will be met by the home output, and the import of oil will be practically stopped. The next step in the forward movement will be the export of oil to Manchuria and Korea.

The success of the company is largely attributable to its peculiar organisation, which is worked on the co-operative plan. All the members of the staff are treated on the family basis. Various considerations, such as bonus, pensions, and allowances, are tendered to all the employés of the company. Both employers and employés identify their interests with the working of the company, and such harmonious relations form a great factor in pushing its business.

That the oil fields of Japan are far from supplying the wants of Japan is evident from the following statement shewing the imports of petroleum during the years 1906 and 1907:—

	1906.	
Whence Imported.	Gallons.	Value.
United States	44,510,557	$4,758,816
Dutch India	12,084,279	1,137,529
Asiatic Russia	1,184,202	94,371
All Other Dountries.. ..	1,649,969	147,904
Totals	59,429,008	$6,138,793

	1907.	
Whence Imported.	Gallons.	Value.
United States	44,489,816	$4,734,626
Dutch India	24,094,321	2,250,877
Asiatic Russia	1,581,477	148,245
All Other Countries.. ..	12	2
Totals	70,165,626	$7,133,750

TEMPORARY ADDRESS.

J. C. GOODALL,
24, Forest Road,
Kew Gardens, S.W.

Late Manager, London Branch, Homelight Oil Co., Ltd.
P.O. Tel. 1272 Richmond.

OIL ON THE PANAMA CANAL WORKS.

By JOHN GEO. LEIGH.

The Union Company's License Amended

Since the publication, in the last issue of the PETROLEUM REVIEW, of the article entitled "The Trans-Isthmian Pipe Line," interesting and important information has come to hand concerning the future use of oil on the Panama Canal works.

As explained in the article referred to, the license granted to the Union Oil Co. of California in January, 1906, to construct and operate a pipe line in the canal zone, was revocable at the will of the Government of the United States. It also bound the company to payments of $500 monthly, and of the usual taxes, and to the supply to the Canal Commission and Panama Railroad Co. of such crude oil as these authorities might require, at the rate of 90 cents per barrel.

These terms, associated as they were with other stiplulations, have always appeared to me onerous, not to say unjust; and it has been, consequently, without surprise that I have learned of their withdrawal or modification. Practical experience during two years proved to the company that it could not continue such a contract except at a loss, and, accordingly, initial arrangements were made for retirement from the Isthmus. So invaluable and economical, however, had the use of oil fuel proved in the construction of the canal that the Commission took immediate steps to prevent such a catastrophe. It ordered an investigation, with a view of ascertaining whether oil of satisfactory grade could be delivered in the zone at less cost than $1·10 per barrel, and whether it would be cheaper to use coal than pay an enhanced price for oil. Both questions were promptly answered in the negative, and representations to this effect were made to the Government at Washington.

The latter is to be warmly commended for its frank and immediate recognition of the rights and wrongs of the situation, and the equitable and ungrudging spirit with which it agreed to amend the license of 1906. The arrangement now ruling, and under which the Union Oil Co. of California will continue the delivery of oil, dispenses with the monthly payment of $500, fixes the price of oil supplied to the Panama Canal Commission and Railroad at $1·10 per barrel for a period of six years from April 1st, 1909; guarantees the use of between 30,000 and 60,000 barrels of oil per month, and provides that no taxes shall be collected from the company, on account of the Government of the canal zone during the term of the agreement, prolonged to April 1st, 1915.

Even with the increased price now paid for oil, the economy effected by the substitution of the latter for coal as fuel on the canal works exceeds 50 per cent. At present about 35,000 barrels are used each month, and the amount consumed is likely to be considerably increased in the near future, with the completion of the installation of oil burners now in progress. At Miraflores, for example, a 225,000-gallon tank is being erected for the storage of oil for fuel in the electrical plant which will supply power for the construction of the canal locks, both at Miraflores and Pedro Miguel.

CAN-MAKING PLANT.

American "Hemmed-edge" Can, showing how easily the end can be forced off.

"Rhodes" "Double-seamed" Can, after being heavily hammered the ends are just as firmly attached.

DOUBLE SEAMED CANS, as made by "Rhodes" Patent Machinery, are produced at **same or less cost** in every respect as the "Hemmed-edge" Can.

Sole Makers— **J. RHODES & SONS, LTD.,** Grove Iron Works, WAKEFIELD, ENG.

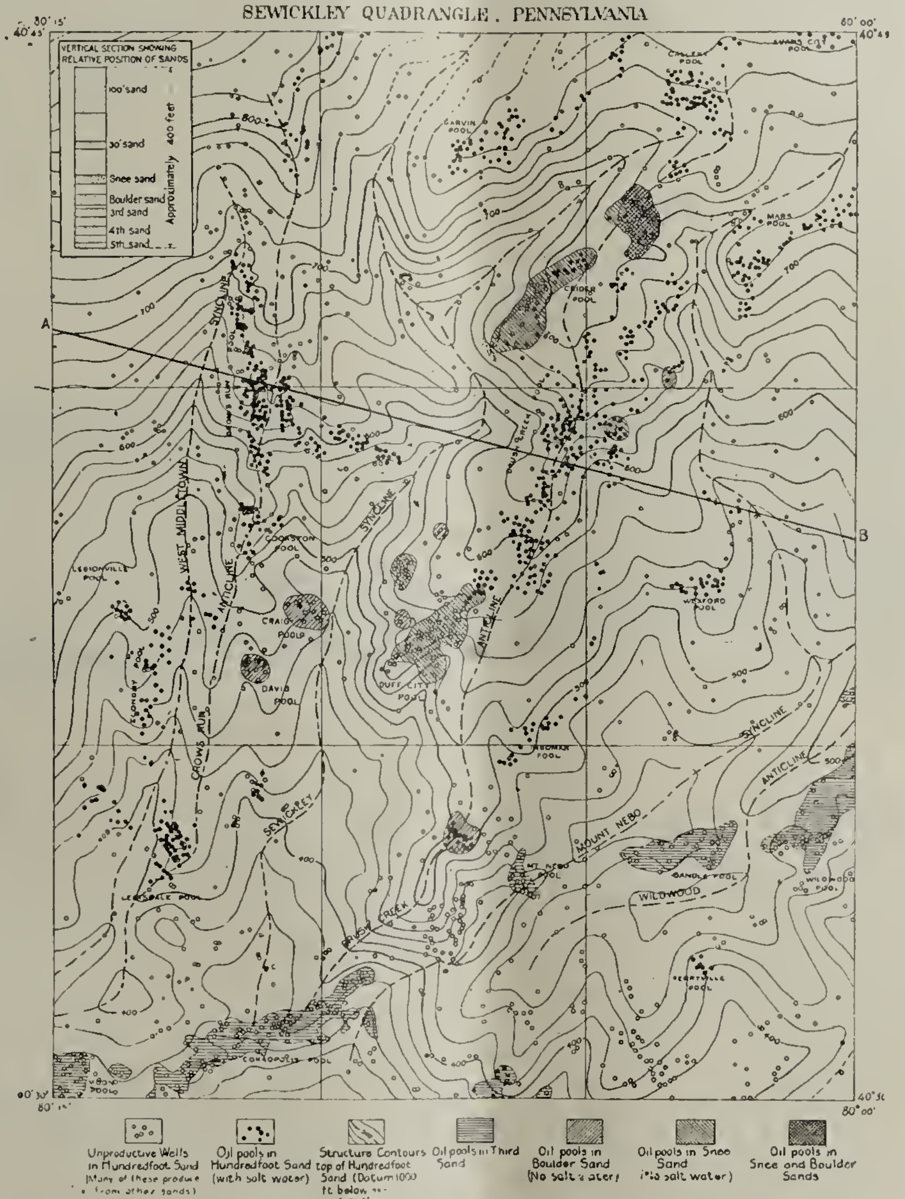
Studies in the Application of the Anticlinal Theory of Oil and Gas Accumulation.

BY

. . MALCOLM J. MUNN . .

Under the above heading, the writer expects to present in "Economic Geology," as the opportunity offers, short informal papers on interesting facts brought out by detailed studies of oil and gas pools. These are intended to discuss the application of the anticlinal theory in explanation of concrete examples of oil and gas accumulations, and to present such criticisms of the theory as the facts seem to justify. The object is to select, as far as practicable, examples that represent well-known types of pools in order to bring to bear upon the theory tests more nearly analogous to those used by the practical oil man. These will go a step further, however, and when possible give reasons why statements of this theory frequently do not measure up to the facts. No attempt will be made to present these papers in logical sequence. They may be regarded best as bits of evidence selected somewhat at random, with the idea of throwing interesting sidelights upon certain mooted questions relative to the occurrence of oil and gas. It is hoped that they will bring up general discussion among geologists in order that a broader and firmer basis for future investigations may be established.

STRUCTRAL MAP SHOWING LOCATION OF CERTAIN OIL POOLS IN THE SEWICKLEY QUADRANGLE, PENNSYLVANIA


VERTICAL SECTION SHOWING RELATIVE POSITION OF SANDS
100' sand
30' sand
Snee sand
Boulder sand
3rd sand
4th sand
5th sand
Approximately 400 feet
A
B
Unproductive Wells in Hundredfoot Sand (Many of these produce from other sands)
Oil pools in Hundredfoot Sand (with salt water)
Structure Contours top of Hundredfoot Sand (Datum 1000 ft. below sea-interval)
Oil pools in Third Sand
Oil pools in Boulder Sand (No salt water)
Oil pools in Snee Sand (No salt water)
Oil pools in Snee and Boulder Sands
80° 00'
40° 30'

Interest in an article will, therefore, be centred in the statement of facts relative to some pools or field, and the application of the anticlinal theory in explanation of these facts, or of any particular phase of the problem which may offer a favourable opportunity for discussion.

In this paper attention is directed to the structural and statigraphic position of certain oil pools in the Sewickley quadrangle, Pa., of the U.S. Geological Survey, with the object of shewing that these accumulations of oil are probably not due to movement by difference in gravity of oil and salt water contained in the oil-bearing bed, or to the direct action of gravity in oil sands that are supposed to contain no water, which are the forces accredited to this work by generally accepted statements of the anticlinal theory.

The Sewickley quadrangle embraces one-sixteenth of a square degree, or about 226 square miles. Its south-east corner is about five miles north of the city of Pittsburg. Within this area more than 2,000 deep wells have been drilled, resulting in the development of several large pools of oil and gas.

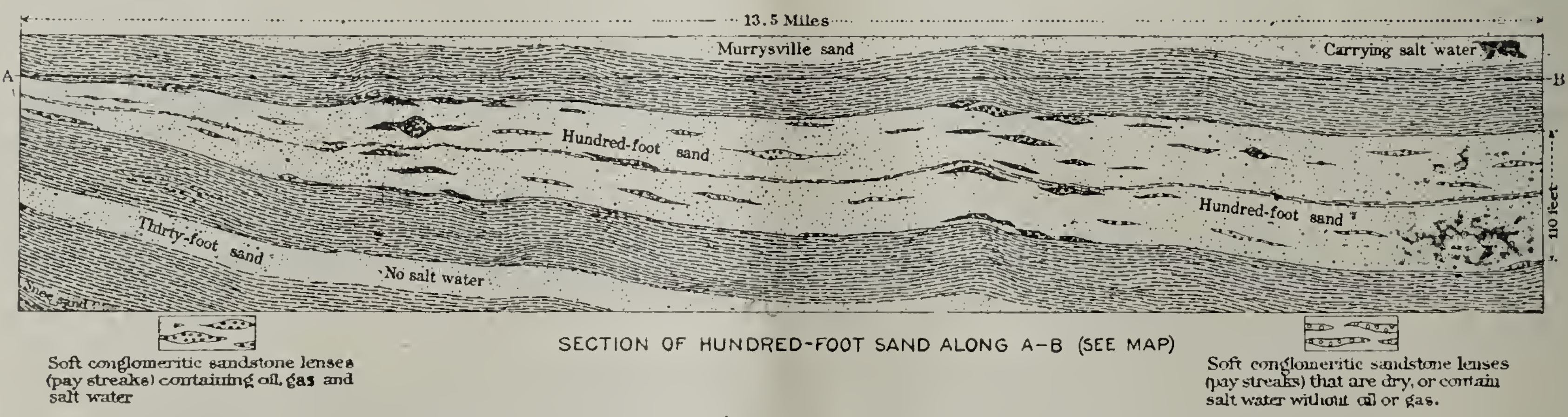
The production comes from seven or more sandstones of the Pocono and Catskill formations, respectively of lower carboniferous and upper Devonian age. These sandstones have a vertical range of less than 500 feet, and lie from 1,200 to 2,100 feet below the surface. In descending order they are called the hundred-foot, thirty-foot, Snee (Blue Monday), boulder (or Gordon Stray), third (or Gordon), fourth and fifth sands. Except the hundred-foot they are seldom more than 40 feet in thickness; the average for each is probably not more than 15 feet. They are prevailingly white or greyish in colour, but are sometimes bluish, red or black. They are of medium grain, porosity, and hardness, and so far as can be learned, do not differ materially in these respects from the sandstones of the remainder of the geologic column penetrated by the drill, or from those which outcrop. Judging from well records they seem to be more widespread and of more uniform thickness and texture than the exposed carboniferous sandstones, but they are known to change considerably in colour, thickness and composition from place to place, and frequently to grade into sandy shales or "shells" of thin hard sandstone, interbedded with shale. The single exception of this rule appears to be the hundred-foot sand which ranges from 30 to 125 feet in thickness throughout the whole area, and which, so far as hundreds of well records shew, has always been found in wells drilled to that horizon.

Though as a whole, these sandstone beds are of medium grain and porosity, each of them encloses lenticular masses of coarse, sometimes conglomeritic sandstone, which is usually very much more porous than the surrounding sandstone. These soft porous patches are from a few square feet to more than a square mile in extent, and constitute the "pay streaks" in which the oil and gas are found.

The most important of these oil-bearing beds is the hundred-foot sand, the bottom of which is at, or near, the base of the carboniferous system. This sandstone underlies thousands of square miles in western Pennsylvania and Ohio. All of the wells shewn on the accompanying map have been drilled to this horizon. To the mouths of nearly all of these, spirit-level lines have been run and their elevations above sea-level determined. Records of most of the wells were secured, which shew accurate steel-line measurements to the top of the hundred-foot sand, and to several pay streaks which it is frequently found to contain. These data are sufficient to warrant the drawing of accurate structural contours on the upper surface of this sand.

From the map it will be seen that these contours reveal a slight wrinkling of this bed into a series of broad irregular folds, having a north-south to northeast-southwest trend, with the axes pitching gently toward the south. The maximum dip of the sand is not greater than 125 feet per mile, the average being somewhat less than 50 feet.

It will also be seen that fully 90 per cent. of the oil-producing areas in the hundred-foot sand are situated on the crests or well up the slopes of the anticlines, and that the basins are remarkably barren of pools of oil or gas. The pools of oil in this sand are confined exclusively to the lenses of soft, porous pay streaks, which occur as irregular patches within the sandstone as here shewn. These pay streaks are entirely disconnected in horizontal extent, but may be roughly grouped into zones, each of which varies considerably in distance from the top of the bed. In most of the pools two or more of these horizons occur. A number of wells have shewn as many as four pay streaks in this sand which, so far as can be learned, are as independent of each other as if they occurred in different sandstones. With the exception of one or two small pools of minor importance, the oil is always accompanied by more or less gas and salt water. The first wells drilled into one of these pay streaks frequently began flowing oil, gas, and salt water. The proportions of each varied greatly from well to well. Their relative proportions, so far as can be determined, had no connection with the thickness or porosity of the pay streaks nor with their vertical or horizontal position in the sand.


SECTION OF HUNDRED-FOOT SAND ALONG A–B (SEE MAP)
13.5 Miles
Murrysville sand
Carrying salt water
A
B
Hundred-foot sand
Hundred-foot sand
Thirty-foot sand
No salt water
110 feet
Soft conglomeritic sandstone lenses (pay streaks) containing oil, gas and salt water
Soft conglomeritic sandstone lenses (pay streaks) that are dry, or contain salt water without oil or gas.

The maximum initial closed pressure of the gas probably varied from less than 300 to more than 600 lbs. per square inch. There was no perceptible difference in ratio of water to oil in the upper and lower pay streaks. In adjoining wells some pump from an upper, and others from a lower pay streak, in the same sand. The wells of the lower pay streak were sometimes first to exhaust both water and oil and be abandoned, while wells in the upper continued to pump. In a broader way the ratio of oil to water in the different pools does not vary with difference in height of the sand at those points. For instance, wells in the Perryville pool produce no greater ratio of water to oil than those of equal production in the same thickness of pay in the Brush Creek pool. Wells in the Cookson and Economy pools produce much less salt water than those of the Crows Run pool, which is above them on the same anticline, and where there is no doubt of the continuity of the sand. The Leetsdale pool carries practically the same ratio of salt water to oil as does the Garvin pool, which is 360 feet higher up the dip of the sand. One almost universal rule holds for all the pools, *i.e.*, the supply of salt water decreases with pumping, and when this is pumped out and the well exhausted of its salt water, no more oil is secured. Wells thus pumped out do not shew a renewal of their supply of water if left standing for relatively long periods without pumping. Wells that do not flow when drilled in frequently fill up several hundred feet with oil and water; when this head is once pumped down and the well then left idle, it seldom, if ever, fills up again to the initial level.

The maximum initial daily capacity of wells was probably more than 2,000 barrels of oil and from 1,000 to 10,000 barrels of water per day. Many of the wells made from 100 to 400 barrels of oil, but the majority ranged from five barrels to somewhat less than 100 barrels per day. A large number of these have pumped for 20 years, and are now making from one to 10 barrels. A significant and clearly established fact is that there is no uniformity in the ratio of decrease of oil and water in wells. For example, two adjoining wells may each have an equal thickness of the same pay streak, and each may have started off by producing 10 barrels of water to one of oil, or *vice-versa*. After 15 years one may be found to pump one barrel of oil to one of water; the other furnishing one barrel of oil to five of water or *vice-versa*.

The diagram on this page is greatly exaggerated in order to shew the relation of the pay streaks. If the vertical scale were the same as the horizontal, the sand would appear as a thin, almost horizontal line. The porous patches are not confined to the oil pools, though they seem to be more in number and to have greater thickness in the producing areas than elsewhere. This may be due in part to the failure of the drillers to detect the thin pay streaks of two feet or less where they do not contain oil, gas, or water. Wherever found, the porous patches are termed pays or pay streaks by drillers regardless of what they contain.

(*To be continued.*)

THE BROXBURN OIL COMPANY, LIMITED.

REPORT BY THE DIRECTORS.

The report of the directors of the Broxburn Oil Co., Ltd., which was presented to the thirty-second annual general meeting of the company, held last Wednesday, at Glasgow, stated that after paying all current charges, the balance at the credit of profit and loss account (including £2,610 17s. 9d. brought forward from the previous year) was £88,880 15s., and the directors recommend that the sum should be disposed of as follows:—(1) In writing off the usual depreciation of 5 per cent. on the net balance of capital expenditure as at 1st April, 1908, £13,801 0s. 1d.; (2) in payment of a dividend at the rate of 6 per cent. on the preference shares of the company, £6,000; (3) in payment of a dividend at the rate of 17½ per cent. on the ordinary shares of the company, free of income tax, £34,956 5s.; (4) in payment of income tax on dividend on the ordinary shares, £1,747 16s. 3d.; (5) to credit of retort account, £12,000; (6) to reserve fund (making it £70,430 5s. 1d.), £10,000; (7) sum to be applied in writing down consols to £84 per cent., £2,120; and (8) in carrying forward a balance of £8,255 13s. 8d.; making a total sum of £88,880 15s.

The work of driving the new mines to the Dunnet seam of shale at Broxburn, has been carried on without interruption during the year, and it is expected that the shale will be reached within the next few months. Meanwhile the pit-head fittings and overhead roadways to the breakers and retorts are being proceeded with, and an electrical power plant is being installed for pumping, haulage, and other purposes. As soon as these operations are completed, the erection of the bench of retorts, referred to in last year's report, will be proceeded with. The electrical power plant at Roman Camp works has been successfully completed, and has been running for three months with good results.

The stocks in hand and in process of manufacture have, as usual, been taken into the balance sheet at low rates.

During the past year the company benefited by the gradually reduced prices of coal, and following on the reductions made from time to time in the wages of coal miners, the wages of shale miners were also reduced, although not to the same extent. Having regard to the then condition of the oil trade, no reduction was made on the wages of shale miners on 1st March last, when coal miners' wages were reduced 6¼ per cent.

With regard to the current year, the directors regret that the American producers, claiming freedom of action with regard to sales of paraffin wax, have in many cases reduced prices beyond what the situation either in Europe or in the United States seemed to call for. This policy must necessarily affect adversely the company's returns for the current year, and the directors have, therfore, had this specially in view in the recommendations which they submit for the consideration of the shareholders.

The directors who fall to retire at this time are Mr. James S. Dixon, LL.D., and Mr. William Love, and, being eligible, they offer themselves for re-election.

PETROLEUM IMPORTS INTO THE UNITED KINGDOM DURING APRIL.

THE SHIPMENTS INTO VARIOUS PORTS.

The total imports of petroleum products into the various ports of the United Kingdom during April amounted to 28,869,620 gallons as against 28,761,410 gallons for March, and a total of 32,874,820 gallons during February. The figures are as under:—

Port.	Illuminating.	Lubricating.	Residuals.	Gas Oil. (Solar.)	Benzine.	Fuel Oil.	Other Descriptions.
Aberdeen	6,000	130	—	—	—	—	—
Barrow...	—	—	24,000	—	615,180	—	—
Belfast...	1,307,110	1,330	—	—	—	—	—
Bristol...	1,089,910	343,340	600	805,340	—	—	24,960
Cardiff...	—	1,080	—	—	—	—	—
Dublin...	5,900	—	—	1,330,000	—	—	—
Dundee	—	8,400	—	—	—	—	—
Glasgow	—	209,920	6,000	—	—	—	5,760
Gloucester	—	920	—	—	—	—	—
Goole	—	2,260	—	—	—	—	—
Grangemouth	11,320	12,780	—	—	—	—	—
Grimsby	—	1,920	—	—	—	—	—
Hartlepool	—	640	—	—	—	—	—
Harwich	—	2,380	—	—	—	—	—
Hull	—	552,990	—	415,760	101,000	—	2,880
Leith	17,580	25,470	—	—	—	—	—
Limerick	530,000	—	—	—	—	—	—
Liverpool	12,290	720,910	5,200	—	50,000	—	9,390
London	5,728,910	3,152,690	9,600	3,234,140	1,850,410	978,000	3,090
Manchester	3,042,020	1,179,880	—	—	—	—	8,600
Newcastle	4,000	55,570	—	—	—	—	—
Southampton	—	370	—	—	—	—	—
Sunderland	1,357,200	—	—	—	—	—	—
Swansea	—	3,490	1,000	—	—	—	—
Totals	13,112,240	6,276,470	46,400	5,785,240	2,616,590	978,000	54,680

MISCELLANEA.

INCREASING PETROLEUM IMPORTS AT MANCHESTER.

The official Shipping Guide to the Port of Manchester for May states that large quantities of oil in bulk continue to arrive in tank steamers at the various oil wharves below Mode Wheel Locks. The imports of bulk oil for the first four months of the present year are greatly in excess of the corresponding period of last year. The arrivals during April included the tankers "Servian," "Bloomfield," "Delaware," and "August Korff," the first two tankers being from Port Arthur, Texas, and the latter from Philadelphia. The aggregate quantity discharged was 19,000 tons.

◆

BAKU PRODUCTION DURING MARCH.

The total production of crude oil at the Baku oil fields during March (o.s.) amounted to 40,786,551 poods, to which the Bebe-Aibat field contributed 9,938,804 poods, including 511,157 poods produced by spouters.

The production of the leading firms operating in the Baku oil fields in March was as under:—

	Poods.
Nobel Bros.	6,114,687
Caspian and Black Sea Society	3,202,963
Mantascheff and Co.	2,425,779
Baku Naphtha Co.	2,276,351
Caspian Society..	2,266,825
Mirzoeff Bros.	1,374,950
Pitoeff and Co.	1,058,700
Russian Naphtha Co.	1,039,600
Aramazd Co.	976,500
Moscow-Caucasian Co.	957,500
Baku Russian Petroleum Co., Ltd.	880,850
Nagieff Mura	872,945
Assadulaeff	849,492
Russian Naphtha Co.	814,500
Russian Petroleum and Liquid Fuel Co., Ltd.	805,045
Bebe-Aibat Naphtha Co.	802,500
Kavkaz Co.	648,234
European Petroleum Co., Ltd.	644,000
A. S. Melikoff and Co.	618,000
T. M. Schibaieff Co.	591,050
Naphtalan Co.	552,000
Benkendorf and Co.	520,742

◆

ROUMANIAN EXPORT TRADE IN MARCH.

The details of Roumania's petroleum export trade during March are given in the following table, the statistics being in tons:—

To	Crude.	Refined.	Benzine.	Lub.	Paraffin.	Resid.
Germany ..	—	—	374·7	—	—	—
Austria.. ..	240	—	—	—	—	—
England ..	130	—	3,467·7	22·6	—	—
Belgium ..	—	3,422	—	8·7	—	—
Bulgaria ..	25·3	72·8	37·4	26·7	10·1	—
Egypt	—	4,587	—	—	—	—
France	0·4	—	6,882·4	—	5·1	—
Italy	113·2	2,435·5	1,674·2	—	7·1	—
Turkey	34·5	1,980·6	7·2	1	—	52·2

◆

DISCOVERY OF HIGH GRADE OIL IN MEXICO.

Latest reports from Mexico tend to confirm the already announced statement that Messrs. S. Pearson and Son have struck a high grade of oil in one of their wells near the Macuspana river, in the State of Tabasco. Prospecting, it appears, has been proceeding in this locality for three years, but the success met with has been successfully kept secret for a long time. The high grade oil is stated to be found at a depth of 1,730 feet, and its quality may be judged from the fact that the workers at the well use the crude oil in the torches which are burned on the field.

THE USE OF NATURAL GAS IN THE GROSNY OIL FIELDS.

The drawbacks of steam power, requiring the consumption of enormous quantities of petroleum, have long been recognised in Grosny, and the petroleum producers have been looking round to replace it by a cheaper motive power. The first steps in this direction have been taken by the Spies Co., who have erected a gasometer, fed from gas bore holes on their plot No. 32. They have been followed by Mr. James MacGarvey, and lately by Akhverdoff Co. This latter company own the well No. 975, which was formally a spouter, and which now yields 2,800 to 3,500 poods of oil daily. By introducing gas, this plot alone economises about 200 poods of oil a day. The source for gas is situated on plot No. 71, where a motor of 60 horse-power of Ruston Proctor system, has been erected. The Kasbeck Syndicate has now followed suite, and utilises the gas yielded by a bore on the plot No. 39. Thus the gas from petroleum wells, which, until now, was simply wasted, is being used to increase the productivity of the Grosny oil fields.

◆

THE GROSNY OIL FIELDS DURING MARCH.

DETAILS OF PRODUCTION.

The production of crude oil at the Grosny oil fields in March amounted to 4,098,201 poods, which included 753,870 poods produced by spouters.

The production of the various firms during the month was as under:—

	Poods.
Akhverdoff Co.	1,588,000
Spies Petroleum Co.	1,238,700
Maximoff's Executors	424,400
Anglo-Russian Maximoff Co...	252,000
Kasbeck Syndicate	235,000
North Caucasian Co.	123,625
Russian Standard	74,500
Moscow Naphtha Co.	32,100

The production by spouters was obtained by the following firms:—

	Poods.
Akhverdoff Co.	442,000
Kasbeck Syndicate	100,000
Spies Petroleum Co.	79,700
Maximoff's Executors	50,000
North Caucasian Co.	20,000
Russian Standard	6,700

◆

THE OPERATIONS OF THE ROUMANIAN REFINERIES DURING MARCH.

The output of the Roumanian refineries during March, in tons, was as under:—

Districts	Crude for Refining.	Benzine.	Kerosene.	Lub.	Coke.	Resid
Bacau ..	261·3	26	106·3	57·2	6	50·1
Buzeu ..	62	8·8	20·6	5·7	—	23·8
Constantza	3,630·3	660·4	1,055·5	121·5	—	1,708·5
Covurlui ..	36	4·4	13·7	3·7	—	12·3
Dambovitza	826	139·2	239·1	4·1	1·6	399·9
Tefov ..	557·1	106·9	111·3	20	—	308·9
Neamtu ..	5·4	0·5	2	—	—	2·5
Prahova	79,846	13,478·6	19,272·2	5.303·5	85·7	40,561·6
R. Sarat ..	13	2·8	6	—	—	3·5
Totals	85,237	14,427·7	20,826·8	5,515·8	93·3	43,071·2

ROUMANIAN NOTES.

Increase of Capital.—The Nafta Co. has increased its capital from 1,600,000 francs to 2,000,000 francs. For 1908 the company has paid 6 per cent. dividend.

A Special Commission has been appointed for the revision of the regulations concerning the transport, storage, and sale of petroleum products at Bucarest.

Suggested Prohibition.—A committee of the petroleum producers of Prahova, appointed by the latter to approach the Ministers of Finance and of Commerce, in view of obtaining a decree prohibiting the importation into Roumania of Galician crude, have now reported a complete success of their mission.

The Production.—The crude oil production continues to increase. The official figures for April have not yet been published but it is certain that they will shew an increase over the production of March, which was 100,000 tons. The Steaua Romana produced over 30,000 tons during April, with an average over 130 waggons per day, of which the largest part was contributed by the Campina field.

Export Statistics.—During the first quarter of this year there have been exported from Roumania 90,550 tons of petroleum products, against 102,430 tons for the corresponding period of the preceding year, shewing a diminution of 11,800 tons, or 11 per cent. Of these 56,903 tons were refined (increase 688 tons), 24,306 tons benzine, and 9,285 tons crude, gas oil and residuals (decrease 12,649).

The Tendency of Prices.—The price for refined is stationary on the home market, but has a downward tendency on the foreign markets. The direct cause is the lower prices at New York, and Batoum, and the competition in Germany between American and Galician oil. But the Near East, because of the geographical position of the Roumanian principal market, continues to buy large quantities of refined.

Prolific Campina.—The well No. 81 at Campina, belonging to the Steaua Romana continues to make eruptions, producing 25 waggons a day. This well for the last five years has given an average of six to eight waggons per day. The total quantity yielded by the well so far is about 10,000 waggons. Other wells of the same company, recently completed, are producing about two waggons each, and one of them, No. 89 even giving 10 to 11 waggons per day.

The Credit Petrolifer.—The balance sheet for April to December, 1908, has been submitted to the administration council of the company, according to which a dividend of 9 per cent. has been fixed for distribution between the shareholders. The sum for amortisation is placed at 322,985 francs; 37,459 francs added to the reserve, which amounts now to 151,991 francs; 225,000 have been retained as special reserve; 35,044 francs for open account The paid-up capital of the company is 5,000,000 francs.

RUSSIAN NOTES.

A New Company.—The first general meeting of the shareholders of the new Sarukhano-Kurinski Co. has taken place at Baku. The following directors have been nominated:—M. Sarukhanoff, F. Rilski and A. Kalartar. The paid-up capital consists of 40,000 shares, 50 roubles each, or 2,000,000 roubles.

Prospecting at Sancta.—A group representing a German company have been studying the possibilities of petroleum production at Sancta, a village in the Ozourgheti district, where new petroliferous fields have been discovered. The property belongs to Prince Djavakichvilli, who is taking a great interest in the exploration of the district.

Mazout Contracts.—The contracts for mazout for the Government will be opened for adjudication in St. Petersburg, at the beginning of May (o.s) Provisionally the administration of the Kazan district of the State railways have instructed the district engineer, A. Golubeff, to buy from Nobel Bros. 150,000 of mazout.

Closing Down.—The benzine rectification refinery of the Grosny-Moscow Petroleum Co., which only opened at the beginning of 1908, has now stopped work and is liquidating its business. Although the quantity refined in this refinery has not been very large, the export by the firm of unrefined benzine was very considerable. It is expected that the whole business of the Grosny-Moscow Co. will pass to Nobel Bros.

Paraffin in Grosny Petroleum.—It is only recently the Grosny producers began to pay attention to the paraffin contained in large proportion in Grosny oil. Investigations have shewn that paraffin is contained in petroleum produced in the West districts of the Grosny region. Explorations in these districts undertaken by a local firm have shewn that paraffin petroleum has defined limits of extension and its subterranean reservoir cuts into the Grosny region from west to east. The percentage of paraffin in the petroleum goes up to 90 per cent, *i.e.*, considerably larger than in Galician, Pennsylvanian and Tcheleken oils.

The New Law *re* State Lands.—The project of the new law regulating the sale of petroliferous State lands is as follows: (1) The plots are leased at a rent which will depend on the production considered as normal for the plot, on the quantity produced above the normal quantity, on the price considered as normal, and on the market price. (2) The normal quantity will be paid on the basis of the difference between the market and the normal price. The quantity produced above the normal will be paid at the rate of a part of the market price, agreed upon at the signing of the agreement. (3) The normal price will be determined by way of adjudication, and the market price by a special committee. (4) Each plot will have to produce a regulated quantity of oil. (5) The agreements will include all drilling, and other works necessary for the production.

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LATEST QUOTATIONS OF PETROLEUM SHARES.

ENGLISH COMPANIES.

This list is restricted to companies who have paid dividends or who are producers.

Company.	Capital Paid Up.	Value of Shares.	Latest Prices.
Assam Oil	£310,000	£1	17/3-18/3
Baku Russian Petroleum ..	£750,000 Ord.	£1	0/1½-0/4½
,, ,, ..	£650,000 5½% Pref.	£1	0/6-1/0
Bibi-Eybat Petroleum Co. ..	£380,000	£1	4/6- 5/6
Californian Oilfields	£400,000	£1	5¼-5⅜
Commonwealth Oil Co. ..	£500,000 Pref.	£1	½-⅝
,, ,, ..	£225,000 Def.	£1	½-⅝
Lobitos Oilfields, Ltd. (£1) ..	£360,000	£1	25/0-26/0
Pacific Oilfields, Ltd. (£1) ..	£200,000	£1	24/0-25/0
Russian Pet. & Liquid Fuel ..	£500,000 6½% Pref.	£1	1/6-2/6
,, ,, ...	£600,000 Ord.	£1	1/3-2/3
Schibaieff Petroleum ..	£575,000 6% Pref.	£5	3/6-4/6
,, ,, ...	£575,000 Ord.	£1	0/3-0/9
Shell Transport & Trading ..	£2,300,000	£1	60/6-61/6
,, ,, ,, ..	£1,000,000 Pref.	£10	10⅞-11⅛
Spies Petroleum Company ..	£387,500	10s.	12/0-12/6

RUSSIAN COMPANIES.

Company.	Nom. Value in Roubles.	Quotations on May 3rd. Lowest Roubles.	Quotations on May 3rd. Highest Roubles.
Baku Naphtha Co.	100	314	355
,, ,, ,, (issue of 1908) fully pd.	100	—	318
Balakhany Naphtha Co.	250	—	—
Caspian Society	1,000	3,775	4,150
Mazout Co.	250	—	—
Melikoff, A. C.	250	—	—
Mirzoeff Bros.	250	—	—
Naftalan Co.	250	—	—
Naphtha Co. "Kavkas"	250	—	—
Naphtha Trading Co., A. I. Mantacheff & Co.	250	126	128
Neft Co.	250	—	—
Nobel Bros.	5,000	10,500	11,275
,, ,, ...	250	—	—
Rops and Co. V...	250	—	—
Russian Naphtha Co.	250	—	—
Society Mazout	250	—	—
Ter-Akopoff Co.	250	—	—
Tumaieff & Co., J. G.	250	—	—
Volga-Caspian Naphtha and Trading Co	250	—	—
,, ,, ,, (Second Issue)	250	—	—

SCOTCH COMPANIES

Supplied by Messrs. MACLEAN AND HENDERSON, STIRLING.

Company.	Capital Paid Up.	Value of Share.	Latest Prices.
Broxburn Oil Co.,Ltd.,Ord. 17/- pd	£235,000	£1	£2 3s. 9d.
Do. 6% Cum. Pref. ..	£100,000	£10	£12 13s. 9d.
Burmah Oil, Ord.	£1,100,000	£1	£5 1s. 6d.
Do. Pref.	£250,000	£1	£1 7s 4½d.
Dalmeny Oil Co., Ord. (7 paid) ..	£37,800	£8 10s	£4 0s. 0d.
Do. 5% Pref. ..	£18,900	£7	£4 12s 0d.
Oakbank Oil Co., Ltd., Ord.	£170,000	£1	£1 19s. 3d.
Do. Pref. (£1 paid)	£36,980	£1	£1 4s. 0d.
Do. Do. (£1 paid)	£63,020	£1	£1 4s. 0d.
Pumpherston Min. Oil Co., Ld., Ord. (17s. paid)	£110,500	17s.	£11 0s. 0d.
Do. 6% Cum. Pref.	£100,000	£10	£13 7s. 6d.
Tarbrax Oil Co., Ltd. Ord. (£1 pd.)	£38,350	£1	£2 14s. 9d.
Do. 6% Cum. Pref.	£35,000	£1	£1 4s. 6d.
Young's Paraffin Co., Ltd., Ord. ..	£452,808	£4	£3 9s. 0d.
Do. "B" Deb...	£150,000	£100	£164 0s.

DUTCH COMPANIES.

Company.	Latest Quotations (per cent.)
Dordtsche Petroleum Co. (Ord.)	154⅛
,, ,, ,, (Pref.)	165½
Int. Roum. Petroleum Co.	22¼
Royal Dutch Petroleum Co...	440¼
Mœara Enim Petroleum Co.	195½
Oklahoma Petroleum Co. (Pref. "A")	128¾
Perlak Petroleum Co.	144
Sumatra Palembang Petroleum Co.	168
Zuid Perlak Petroleum Co. (Pref.)..	155¾
Union Petroleum Co.	93¾
Bibi-Eybat Petroleum Co.	29¾
Russian Petroleum and Liquid Fuel Co. (Ord.)	10¾
,, ,, ,, (Pref.)	12⅜
,, ,, ,, (6% Debs.) ..	35¼
Schibaieff Petroleum Co. (Ord.)	4⅞
,, ,, (Pref.)	5½
Shell Transport and Trading Co.	283½

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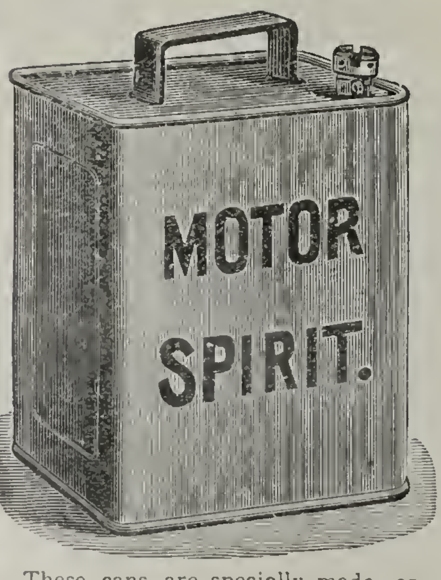
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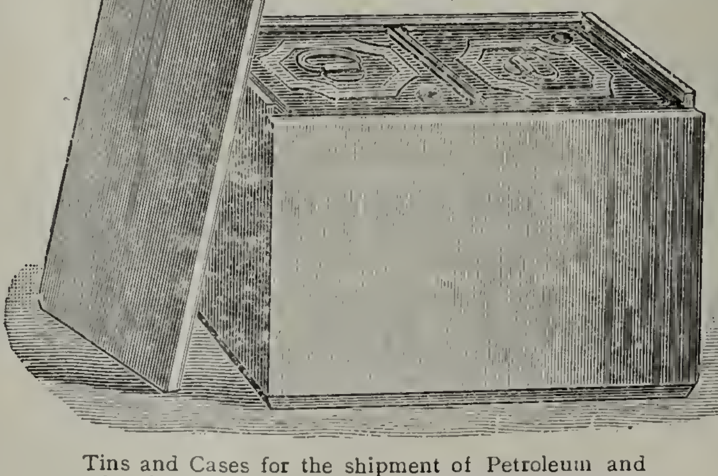

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THE
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SATURDAY, MAY 22, 1909.

NEXT WEEK'S IMPORTANT CONFERENCE IN LONDON.

AS has already been announced in the REVIEW, the members of the International Commission for the standardisation of the methods of testing petroleum products, are to meet next week in London, and every-one in the least identified with the petroleum industry cannot but wish them God-speed in their arduous labours.

The more one studies the present methods in vogue for testing the products of petroleum in the various countries, the more one will admit that there is great scope for the efforts of this International Standardisation Committee, which are aimed, as the title of the Commission implies, at securing uniformity of methods.

The last conference at Bucarest, therefore, took a step in the proper direction when it suggested the formation of such a Commission, and that it also recognised the seriousness of the work to be discharged, and the necessity for having a powerful Commission to deal with the problem, is apparent from the thoroughly representative international Commission which was then unanimously elected. Since its election, the committee has devoted considerable time to the problem confronting it, and for the purposes of practical working, the mission which it was charged to carry out has been divided under three headings. These are :—(1) The unification of international methods for the testing of crude petroleum and its products ; (2) introducing an international nomenclature for all petroleum products; and (3) assisting in the framing of regulations which shall be international in character, regarding the transport of petroleum and its products, both by land and sea.

The general secretary, Dr. Ubbelohde, of the Technical College, Karlsruhe, has entered heart and soul into the difficult work, and already he has secured the adhesion of practically every European Government to the scheme which will eventually be put forward at the conclusion of the Committee's investigations. The outcome of the London conference is expected to be very important, inasmuch as a general plan of procedure will be laid down and the campaign commenced without delay.

The Conference will open on Monday, the 24th instant, at eleven o'clock, at the Cecil Hotel, and will be continued through the day, the sittings being concluded on the 25th inst. Dr. Ubbelohde has done everything possible in order to ensure a large attendance of the various delegates, and at the time of writing, we are informed that the following gentlemen will be present :—

Dr. David T. Day (Geological Survey, Washington), Prof. Eugene Tassily (Paris), Dr. Ludwig Weinstein (Berlin), Dr. Holde (Berlin), Mr. W. L. Van Loo Sluytermann (Administrator of the Kon. Nederl. Maats., Rotterdam), Prof. Villavecchia (Rome), Dr. L. Edeleanu (Bucarest), Dr. Aisinmann (Bucarest), Prof. Zaloziecki (Lemberg), Dr. L. Singer (Pardubitz), Dr. A. A. Gouchmann (Baku), Prof. Marko Lecco (Belgrade), Prof. Hoogewerff (Hague), Dr. Ubbelohde (Karlruhe), Prof. Colson (Paris), Dr. J. Lewkowitsch (London), Dr. Paul Dvorkovitz (London), Dr. Max Bohm (Ostrau) Mr. J. Rodrigetz Mourelo (Madrid), Dr. Birger Halvorsen (Christiana), and Prof. Gr. Pfeiffer (Bucarest).

At the conclusion of the first day's sittings, a reception of the delegates will be held at the Criterion Restaurant, Piccadilly Circus, W., which has been arranged by Dr. Paul Dvorkovitz. This social event promises to be most successful, and, inasmuch as the company who have accepted invitations for the occasion include most of the influential gentlemen associated with the various branches of the petroleum trade both in London and the Provinces, the various foreign delegates may be assured of having a most hearty reception accorded them upon their visit to this country.

On Tuesday, the sittings of the Commission will be continued, when it is expected that Dr. Day and his colleagues from the United States will offer a most cordial invitation to the Commission to arrange its next meeting in America. It is an open secret that the Government of America recognises that the Commission has a most difficult, and at the same time, important mission to fulfil, and when the members do cross the Atlantic—possibly toward the end of the summer—it is a foregone conclusion that the open hand of hospitality will be accorded them.

After the Commission has concluded its sittings on Tuesday afternoon, the intention is that the delegates shall be taken to view some of the large petroleum storages upon the river Thames, but it is impossible at the present time to give definite information upon this part of the social programme.

It is only fair to state that several influential firms interested in the petroleum trade are taking a great interest in the visit of the Standardisation Commission to this country, and apart from their moral support, have contributed toward defraying the expenses which necessarily have to be reckoned with upon such an occasion. Their names are the British Petroleum Co., Ltd., the Burmah Oil Co., Ltd., and the Lubricating and Fuel Oil Co.; Ltd., of London. To these companies we would express our thanks, for, by their practical assistance, they have set an example which other large firms in the oil trade may, in after years, wish they had copied.

We, on our part, can only hope that the results of the meetings of the Commission in London may lead to a speedy solution of that problem which at present surrounds the testing of petroleum. Each member is willingly giving his time in order that he may do some little to bring nearer realisation the ends in view, and such sincerity is truly worthy of the greatest success.

SCIENTIFIC NOTE.

CALORIFIC VALUE AND SPECIFIC GRAVITY.

The American scientists, Sherman and Kropf, having determined the calorific values and specific gravities of 64 various grades of petroleum and petroleum products, have established the existence of a certain relation between the calorific power of an oil and its specific gravity—the higher the latter the lower the former. Sherman and Kropf have worked out a formula for calculating the calorific power of any oil from its specific gravity; the calorific value, expressed in B.T.U. is equal to 18·650+40×(specific gravity in degrees B. less 10). The calorific value of the 64 oils was calculated according to this formula and that actually found by experiment did not differ more than 2½ per cent.

Oils of specific gravity.	Have a calorific value.
0·70—0·75	11·700—11·350
0·75—0·80	11·350—11·100
0·80—0·85	11·100—10·875
0·85—0·90	10·875—10·675
0·90—0·95	10·675—10·500

THE MIGRATION OF PETROLEUM.

A SPECIALLY TRANSLATED SUMMARY FROM THE "MONITEUR DU PETROLE ROUMAIN."

By Prof. L. MRAZEC, Director of the Geological Institute of Roumania.

(Continued from page 278.)

We have already studied the formation of petroleum in sedimentary and eruptive rocks, but most of the petroleum deposits are not to be found in these rocks but in formations of more recent origin—in the pliocene series, in strata formed of sands and sandstone, namely, sarmatic, meotic, pontic, dacic and even levantine, which in some parts already joins the pleistocenie deposits, which are the beginning of the actual era. All these strata are characterised by deposits of sea water, sweetened by the addition of large quantities of river water, and the higher the pliocenic strata is situated, the more sweet water is discovered in it. In all the complicated system of these waters we do not find a single sign of petroleum having originated there. And what is more, the pliocenic strata become petroliferous only where they tectonically are in relation with a saliferous formation. These considerations alone authorise us to consider the petroliferous deposits of these strata as secondary deposits and the petroleum they contain as having entered the strata by migration from a saliferous formation.

But if the secondary nature of these petroleum deposits is evident by itself, the way of their migration is so far not thoroughly established. The principal cause of this lack of knowledge is that the whole of the physical properties of petroleum generally are not yet known. Indeed, besides some optical observations on the power of petroleum fractions to rotate, and which contentions are in no way decisive, we do not possess any physical observation of this substance. Still, geological observations provide us with certain indications of the geological condition of migration, and allow us to hazard some opinion, to be verified by experience. The author has already established in another work on the migration of petroleum two important factors have to be established: the ways by which the migration of the hydrocarbons is being performed and the causes producing it.

It is generally admitted that the migration takes place by way of both large and small fissures traversing a system of rocks. This hypothesis is especially advanced by Prof. Hoefer; but to admit it, it is necessary to prove that such fissures really exist in all the neighbouring strata of petroliferous deposits. In hard rocks, such as sandstone, limestone, silex, etc., this way of migration may be the most frequent, but in plastic rocks such as clays and marles it is rarely met with.

Experience and minute study of petroleum deposits shews that the migration of hydrocarbons can be effected directly through clay, sand and soft limestone rocks. Besides, the hydrocarbons being under very great pressures owing to the great tension of their gaseous components, naturally move to the points of least resistance. As we know, there are no rocks in existence which would be totally impermeable to water. Naturally still less impermeable are they with regard to petroleum. This permeability of the rocks for oil is the cause that in their ascendant movement the hydrocarbons cannot be stopped but by sheets of water, which constitute the only impermeable obstacle in their way. That is how we usually meet in the roofs of petroleum strata water strata, which to a certain point are a natural means of conservation for the petroleum deposits.

The causes of the migration, be it by way of fissures or by force of capillarity, are of two kinds:—(1) causes arising out of the very composition of petroleum; (2) causes having nothing to do with the composition of petroleum, but simply facilitating or forcing the migration.

The petroleum, owing to its gaseous components, is always under some pressure, which constitutes the so-called interior tension of petroleum, tension quite sufficient for causing the ascensional migration of the hydrocarbons. In this case it may happen that this migration is accompanied by a fractionation of the hydrocarbons according to their specific gravities and viscosities. It is easy to see that the migration occurs at all points of the earth crust, where hydrocarbons are under sufficient tension to vanquish the gravity, the atmospheric pressure, the resistance of the rocks traversed, and the power of attraction—absorption—exercised on the hydrocarbons by the substance of the rocks. The time taken by such migration may be very long. Whole geological periods, or even eras, may be necessary for the accumulation of large deposits of petroleum.

But the migration of hydrocarbons can be caused, facilitated, and even forced by forces having no relation at all to their formation and composition.

The geothermic temperature increases the tension of the hydrocarbons. As the most important petroleum deposits are restricted to the geosynclinals, *i.e.*, are situated at very large depths of hundreds or thousands of yards, it is easy to understand that the temperature of the petroleum accumulated in these deposits is high. In the volcanic regions the forcing of the migration by this cause will be very powerful, and the migration will have the character of a real distillation.

The hydrocarbons can also be replaced by waters. This phenomenon is observed in that part of the earth crust which is situated above the hydrostatic level of the respective region; but the principal cause of a rapid migration is the pressure produced by orogenetic forces—forces resulting from the contraction of the earth crust and revolving in dislocations of the latter. The gradual pressures occasioned by these dislocations increase the natural tension of the hydrocarbons enhanced already by the geothermic degree in the depths of the earth. Under the impulsion of these forces the hydrocarbons are deplaced toward points of the least resistance, through the fissures in the rocks, or directly through the very substance of the rocks, by the force of a capillarity. This accelerated migration will stop as soon as the impulsion forces prove sufficient for vanquishing the resistance of the rocks. The conditions will then prove favourable for accumulation and rich deposits of petroleum will be formed. As the majority of deposits are situated in regions intensively folded, we have to conclude that orogenetic forces have played the principal rôle in their formation.

The Salt Waters of the Petroleum Deposits.

We have seen that there exists a narrow genetic relation between solutions generally and those of sodium chloride and salts of lime especially from one part, and the formation of hydrocarbons from the other. The fact that we regularly find in all the rich deposits salt waters, and that these deposits in most cases are proved of secondary nature, shews that these salt waters have come into the deposits at the same time as the petroleum. In view to clearly understand this relation, it is necessary to say here a few words on the distribution in the earth crust of the so-called errant waters resulting from meteoric infiltration. The earth crust can be from a general point of view divided into two zones, separated by an irregular surface which is called the hydrostatic level.

These subterraneous waters can be excluded from circulation by a sinking of their region of circulation, and remain stagnating for very long, even for whole geological periods. Prof. Mrazec calls these fossil or veteric waters. Laying at great depth they naturally are of high temperature, and being saturated with different substances, such as calcium carbonate and silica, they reinforce and cement the rocks in which they lay. But the sinking of a region precisely enhances the bituminisation process by the exclusion from the action of the air on the organic substances accumulated in the sediments. We have to conclude, therefore, that the salt waters are contemporary to the sediments in which they are laying, and to the petroleum which they accompany.

By a rising of the strata of veteric waters above the hydrostatic level, these latter become free and enter again into the general circulation. The question is now how two liquids possessing quite different properties, such as salt waters and petroleum, could circulate and migrate together. We know that salted water can absorb very large quantities of gaseous hydrocarbons, corresponding to the pressure to which they are submitted. A certain influence have also the degree of concentration and the nature of the dissolved salts.

We know by observation that petroleum coming from eruptive wells almost always contains large quantities of salt water, very difficult of separation, and as the eruptions of petroleum are exclusively due to the large quantities of gas which it contains, and as the salt water contains as well large quantities of absorbed gas, the two easily form emulsions.

When the migration is by way of fissures, a decrease in the pressure will simply produce a desemulsion. But when the migration is by way of capillarity through the rocks, the process is more complicated. The clay of the rocks has the property of retaining water and filtrating the oil. But when the pressure under which the migration takes place is larger than the sum of desemulsion forces, not only the migration of the emulsion will not be hindered, but the emulsion itself will become more perfect, owing to the very fine division of the liquid passing through the minute cells of the rock. As soon as the pressure diminishes, desemulsion again takes place, and in this way are formed in the rocks strata of pure oil, strata of salt water, in which are absorbed gaseous hydrocarbons, and strata of emulsion.

To sum up. The conditions necessary for formation of rich deposits of petroleum are:—

(1) A rich and powerfully developed petroleum rock, able to easily give away the hydrocarbons it contains.

(2) Migration conditions favourable for an accumulation; for recent deposits a migration under large pressure.

(3) Good conditions of accumulation and especially of conservation of the deposit.

◆

ENGLISH PATENTS.

(Specially contributed by Messrs. EDWARD EVANS & Co., Consulting Engineers, Chartered Patent Agents, and Enrolled Patent Attorneys, of the United States, of 27, Chancery Lane, London, W.C.

Application Filed in Great Britain.

Petrol or other Gas Explosive Turbine.—J. H. Peacock and F. Topliff, 46, Airn View, Cononley, Keighley. No. 8269 of 1909.

Application Published in Great Britain.

Petroleum and like Stoves.—Angel Francisco Chiesanova. No. 10736 of 1908.

This relates to a petroleum or other liquid-fuel stove with feet having tongues which slide into corresponding depressions provided in the bottom of the fuel reservoir, and are held on the reservoir by means of rods having screw-threaded extensions, and whose shoulders bear on the inner edge of the fuel reservoir, and which are flattened at their upper parts in order to be able to be slid into slots provided by strips in the funnel, so that the members are firmly connected together and may readily be taken apart.

CALIFORNIAN CRUDE OIL PRODUCTION FOR THE PAST EIGHT YEARS.

The production of crude petroleum in California from 1902 to 1908 by counties, in barrels, was as under, according to a carefully compiled statement of the Los Angeles Chamber of Mines:—

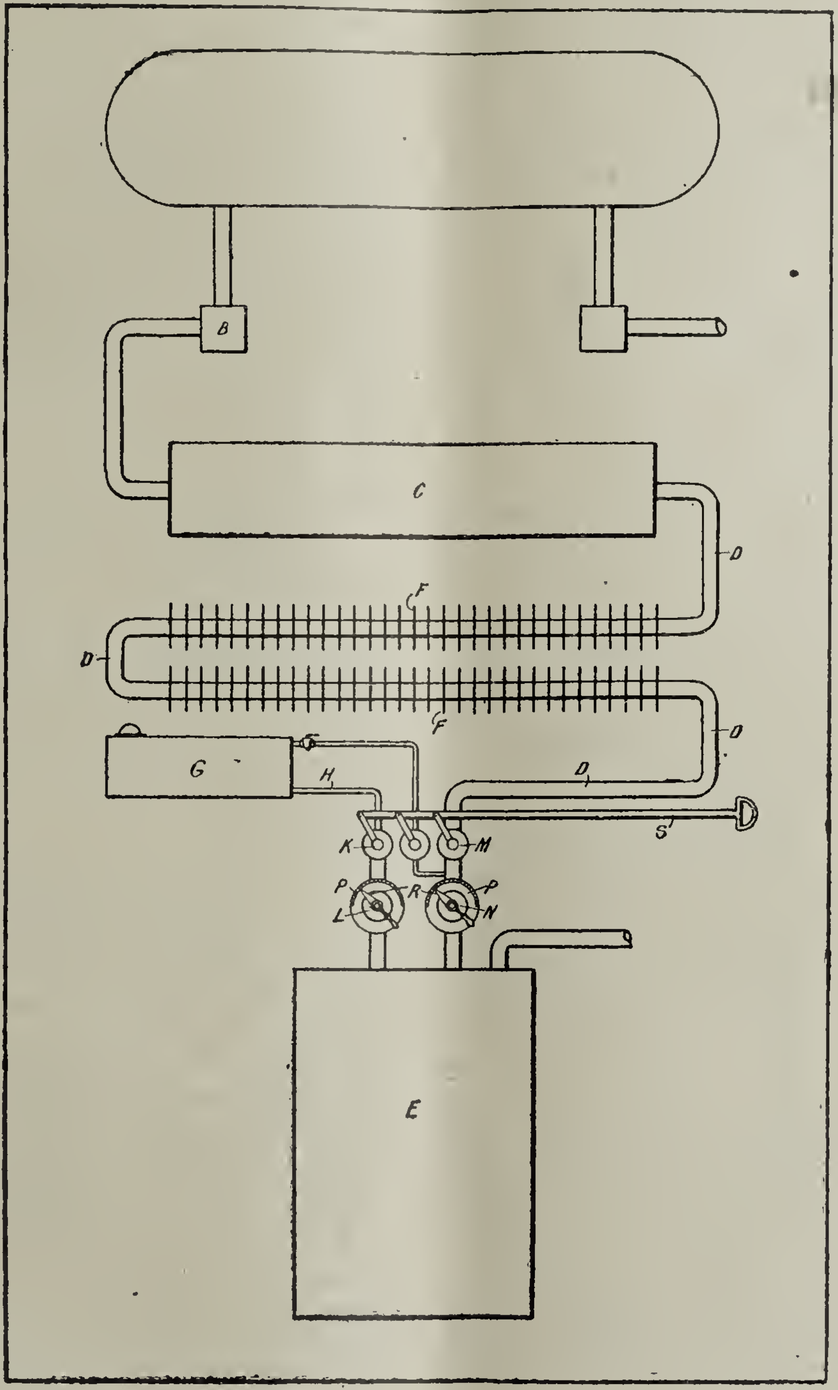
Year.	Fresno.	Kern.	Los Angeles.	Orange.	Santa Barbara.	Ventura.	Scattering.	Total.
1902	572,498	9,705,703	1,938,114	1,038,549	242,840	484,764	1,800	13,984,268
1903	2,138,058	18,077,900	2,087,627	1,413,782	306,066	348,295	10,744	24,382,472
1904	5,114,958	19,608,045	2,102,892	1,473,335	789,006	517,770	43,428	29,649,434
1905	10,967,015	14,487,967	3,469,433	1,429,688	2,684,837	337,970	50,563	33,427,473
1906	7,991,039	14,520,864	3,449,119	2,032,637	4,774,361	299,124	31,464	33,098,608
1907	8,871,723	15,652,156	3,477,235	2,604,982	8,708,077	357,094	77,108	39,748,375
1908	10,996,781	17,800,000	3,725,000	2,000,000	10,000,000	600,000	300,000	45,421,781
Total	46,652,072	109,852,635	20,249,420	11,992,973	27,505,187	2,945,017	515,107	219,712,411

THE MAKING OF PETROL GAS.

AN IMPROVED APPARATUS.

An English patent has recently been granted to Mr. William Shearer, of Ferniecot, Abbey Road, Eskbank, Scotland, for an invention relating to apparatus for making petrol or air gas, and it has for its object by an improved combination and arrangement of the parts, to more particularly adapt such apparatus for lighting railway carriages and the like, but which may also be employed in a modified form for general illuminating purposes.

In carrying out the invention, for example, in the case of a railway carriage, the patentee employs the ordinary gas pressure tank as an air pressure or storage tank. This air storage tank communicates with, and is supplied with air from the Westinghouse brake apparatus, or any other available means may be employed for this purpose. To the outlet or discharge pipe of the air tank there is fitted a reducing valve whereby the air is reduced to a suitable pressure, the air passing preferably through a drier and thence to the carburetter. The air pipe and the supply pipe from the petrol tank are each provided with one or more valves which may be operated by means of a single lever.



As shewn in the drawings, the apparatus consists of the air pressure tank, A, suitably connected to the Westinghouse brake apparatus. The air tank, A, preferably communicates with a drier, or purifier, C, and there is interposed between the drier and the air tank a reducing valve, B, of any suitable construction. The air passes from the drier, C, by a pipe, D, to the carburetter, E, which may be of any suitable type. The pipe, D, may, if desired, be provided with grids, or external flanges, F, for the purpose of raising the temperature of the air. The petrol tank, G, communicates with the carburetter, E, by means of the pipe, H, this pipe and also the air pipe, D, are each provided with two valves, K, M, and L, N, and these valves are, preferably, coupled together so as to form two sets, each set being operated by a single lever, S. The first set of valves, K, M, controls the supply of petrol and air to the respective valves, L, N, which in turn regulate the petrol and air passing to the carburetter, E. To facilitate accurate adjustment of the valves, L, N, one, or both, of these valves may be provided with a dial, P, and pointer R, so that by moving the pointer to the number of lights required, and shewn on the dial, a corresponding movement is imparted to the valve, or valves.

To ensure a constant flow of petrol from the tank, G, this tank is connected to the air pipe, D, preferably, at a point between the valve, M, and the carburetter, E, so that when the valve, M, is open, the petrol in the tank, G, is under pressure, but immediately the valve, M, is closed, the pressure is relieved.

CLASSIFIED IMPORTS INTO UNITED KINGDOM UP TO MAY 17th, 1909.

IN GALLONS.

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Country.	Illuminating.		Lubricating.		Residuals.		Gas Oil. (Solar)		Benzine.		Fuel Oil.		Other Descriptions.		Totals.	
	Since May 3.	From. Jan. 1.	Since May 3.	From Jan. 1.	Since May 3.	From Jan. 1.	Since May 3.	From Jan. 1.	Since May 3.	From Jan. 1.	Since May 3.	From Jan. 1.	Since May 3.	From Jan. 1.	Since May 3.	From Jan. 1.
Austria ...	—	—	—	40,930	—	161,450	—	—	—	—	—	—	—	—	—	202,380
Belgium ...	—	70	29,520	267,170	—	—	—	—	—	—	—	—	—	—	29.520	267,240
Canada ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dutch India.	—	400	—	—	—	—	—	—	1,288,570	8,027,170	—	80	—	80	1,288,570	8,027,730
Germany ...	33 780	673,340	63.320	475,880	2,250	4,250	370,000	370,000	—	1,000	—	—	—	9,210	469,350	1,533,680
Holland ...	—	300	—	1,900	—	—	—	—	377,830	2,389,240	—	—	—	22,240	377,830	2,413,680
Roumania ...	720,000	4,325,450	—	—	—	24,000	690,000	2,881,800	740,000	2,262,220	—	—	—	—	2,150,000	9,493,470
Russia ...	250	8,187,820	4,020	2,442.590	—	119,750	—	—	355,800	1,242,340	—	—	—	63 780	360,070	11,996,750
U.S.A. ...	4 427,890	47,618,340	1,054,130	16,755,335	—	47,880	5,704,290	28,683,650	3,399,180	8,719,420	—	4,189 520	11,780	1,270,910	14,597,270	107,344,585
Other Countries	1,000	1,800	290	15,260	--	—	—	1,000	—	887,380	—	240	310	1,910	1,600	907,590
	5,182 920	60,807,520	1,151,280	19,999,065	2,250	357,330	6,764,290	31,936,450	6,161,380	23,528,770	—	4,189 840	12,090	1,368,130	19,274,210	142,187,105

A REVIEW OF THE PETROLEUM REFINING INDUSTRY IN ROUMANIA.

Being a Summary of an Article, by Mr. C. HALACEANU, Inspector of Finances, which appears in the current issue of the "Revue du Petrole."

(*Concluded from page 249.*)

The residuals left in the stills are redistilled by means of superheated steam, and two products are obtained, crude lubricating oils and heavy goudron. The water contained in the first is eliminated, and the oil passed into agitators, where it is mixed with 5 to 12 per cent. of sulphuric acid, according to the quality of the oil to be refined, and from these into other agitators, where it is treated with 1 to 1·5 per cent. of caustic soda. After eliminating the soapy matter, the oil is heated to a certain temperature and then passed into reservoirs of large capacity, where it is treated with compressed air. The loss of oil during distillation is from 2½ to 3 per cent., and from 12 to 15 per cent. in the refining.

The agitators are usually formed of metal reservoirs, open or closed, with a funnel-shaped base, laid on metal supports, or on brick foundations. An energetic mixture is obtained by means of compressed air. The proportion of chemicals used for refining is 1·25 to 1·50 per cent. of acid, and 0·13 to 0·18 per cent. of soda for lamp oil, and 0·75 to 1·0 per cent. of acid, and 0·04 to 0·05 per cent. of soda for benzine. The loss in lamp oil is 1·5 to 2·0 per cent., that on benzine 0·5 to 0·9 per cent.

By redistilling the residuals, three products are obtained: gas oil of specific gravity 0·860, paraffin oil of specific gravity 0·885 to 0·895 and freezing point of 20 to 23° C., and goudron 0·965.

The paraffin oil is passed into a freezing apparatus where it is solidified at 5° C. and from which it passes into filter presses where it is separated into paraffin and oil. The paraffin is then submitted to a pressure of 35 atmospheres in special hydraulic presses and remelted at 50° C. and refined first with 10 to 12 per cent. sulphuric acid, 1 per cent. of soda, and finally with 7 per cent. of hydrosilicate. It then passes into moulds and is solidified in the form of plaques. The melting point of this product is between 46° C. and 56° C.

Having now obtained a general idea of the movement of the oil in the refineries, it will be of interest to give a few details of the number of working apparatus in use and their working capacity. There are 31 agitators for lamp oil in the first group of refineries, of a total charging capacity of 3,138 tons; in the second group 13 agitators, capacity 212 tons; and 57 in the third group, of a capacity of 137 tons. For benzine the respective numbers are 32, 6 and 13, with capacities of 883½ tons, 30½ tons and 37 tons. For lubricating oil there are 22, 14 and 25 agitators of a respective capacity of 120, 115 and 57 tons.

As regards the utilisation of the charging capacities, it is for lamp oil 0·55, 0·51 and 0·54 for the three groups, *i.e.*, in the average just a half; in the benzine refining the corresponding figures are 1·26, 2·30 and 1·31, that is to say, a rectification of benzine must, on the average. take considerably less than 24 hours, in order that the whole quantity of the benzine produced should be rectified.

The reservoirs can be classed into two groups, metal ones and wooden ones, the former made of iron plates, rivetted together, and built on brick foundations. The wooden reservoirs are made in the shape of troughs, buried in the ground, but these are now generally being replaced by metal reservoirs. For the storage of residuals there are used in many refineries reservoirs built of bricks, or simply excavations in the ground. Altogether there are 820 sheet-iron reservoirs of a capacity of 362,250 cubic metres, and 1,099 wooden ones, of a capacity of 24,000 cubic metres. There are 84 steam generators in use; of benzine and electric motors there are 31 and of tank waggons there are 1,565.

THE TEXAS COMPANY,

Transporters, Refiners and Distributors of Petroleum and its Products.

CRUDE BENZINE & DEODORISED BENZINE.

FUEL OIL AND GAS OIL

A Specialty.

LUBRICATING OILS.

HIGHEST GRADES. UNIFORM QUALITY.

"TEXACO" BITUMEN.

Over 99 % Pure Bitumen.

THE BURMAH OIL COMPANY, LIMITED.

THE SEVENTH ANNUAL GENERAL MEETING.

The seventh annual general meeting of the members of the Burmah Oil Co., Ltd., was held at the Merchants' Hall, Glasgow, on Friday, May 7th, 1909, Mr. John T. Cargill presiding.

The Chairman intimated letters of apology from Mr. Leonard Gow and Mr. John Innes, and he laid on the table certificate that the notices calling the meeting had been duly posted, together with the proxies received.

In moving the adoption of the directors' report, the Chairman said :—At the last annual meeting I expressed the hope that in due course the directors would be able to submit a satisfactory statement of accounts for 1908, and it is a source of no little satisfaction to me that I am to-day in the position of fulfilling that hope. During the year the oil trade of India continued in an extremely healthy and satisfactory condition, and it is mainly due to that fact that the year's trading shews such gratifying results. As shewn by the profit and loss account, the net profit for the year, including the balance brought forward, amounts to £618,551 16s. 9d., as against £608,095 18s. 6d. for 1907. In dealing with the profits the directors have continued their policy—which has all along met with your hearty approval—of providing liberally for depreciation in every direction, and also building up a strong general reserve, and they feel sure that their recommendation that £200,000 should again be placed to that fund, thus bringing it up to £740,000, will have the full support of the shareholders. £25,000 has been placed to the insurance fund, making £125,000 at the credit of that account, and additions of £9,934 18s. 9d. to the marine insurance fund bring that account up to £49,330 18s. 8d. In the oil fields the outstanding feature of the year's operations has been the satisfactory results obtained in the Khodoung field, where, by drilling to greater depths than hitherto undertaken in that territory, wells with initial yields of from 1,000 to 3,000 barrels per day have been brought in, thus proving more conclusively than ever the richness of this field in which the company first began its operations. In the new district, referred to in the previous annual report, we have struck oil in several bores, in quantities which point to this territory being rich in oil. Unfortunately, while undoubtedly of a high quality, the oil in some of these wells is in what is technically called an "emulsified" condition, which prevents its being mixed with our other oils and sent to the refineries. It is hoped that as the gas pressure in these wells diminishes, the oil will right itself, but if not, some means of treating it at the wells will no doubt be discovered. In none of the other new districts being tested has oil been struck in paying quantities, but the search for fresh oil-bearing territory is being conducted with unbated vigour by our highly experienced geologists, who carry on their work with the greatest enthusiasm, often under most trying conditions. As was done in the two previous years cost of all development work and expenditure on fields abandoned during the year have been written off, and by adding £80,000 to fields reserve the amount at the credit of that account is brought up to £250,000. As mentioned in the report, purchases of oil lands and large additions to plant and stocks of drilling materials account for the unusually large addition to the field account. During the year a large amount of important work has been carried through at the refineries, including the erection of a complete bench of stills at Syriam; extensions and improvements to the wax producing and refining plant; and large additions to crude oil tankage. I may here mention that at the works and in the oil fields we have now tankage—in steel tanks ranging from 10,000 to 2,000,000 gallons capacity—for crude and refined oils for over 80,000,000 gallons. The unfortunate silting up of the river at the Syriam works necessitated the erection of three jetties of about 1,000 feet each in length for the proper landing of plant and stores and shipping of products, and these were successfully completed during the year. With a view to possible future developments your directors some little time ago secured a splendid site of fully 500 acres about two miles from the present Syriam works, where there was not room for further extensions on a large scale without danger from congestion. A new refinery, capable of treating 1,000,000 gallons of crude oil per month was commenced on this site early in 1908, and it is anticipated it will be working fully by 1st July next. A feature of this refinery is the installation of a central electric power station, which should materially reduce working costs, and a railway has been laid connecting the two works.

I am glad to be able to report that our five tank steamers have again run steadily throughout the year without an accident of at all a serious nature. To further develop the Burma kerosene oil trade an order was placed during the year with Messrs. Armstrong, Whitworth and Co. for a tanker to work the Burma coast trade and three twin screw barges to run on the Irrawaddy river, and these left Newcastle on 27th March, and arrived safely in Rangoon on 3rd inst. Further important additions were made during the year to the company's tank installations, depôts, and distributing facilities, and it is to the vigorous policy carried out in this direction during the past three years by the Burmah Oil Co., and the other two great distributing oil companies in India—the Asiatic Petroleum Co. and the Standard Oil Co.—that the very gratifying expansion of the oil trade in that country is largely due. It was hardly to be expected that in the carrying out of so great an undertaking as the main pipe line—one of the largest engineering works of the kind ever undertaken, and which had to be carried through under climatic and other conditions, which gave no precedent to work on—difficulties and delays of an unforeseen nature would not arise. I said at the last annual meeting that it was anticipated that the line would be in full working order before the end of last year, and I unhesitatingly say that but for abnormally heavy rains—the heaviest experienced in Upper Burma for something like 60 years—that anticipation would have been fulfilled, for we calculate that we lost something like three months owing to these floods, and yet by the 3rd of February we were pumping oil the whole 275 miles from the fields to Rangoon.

Another serious difficulty arose from the contraction and expansion of the line. Our previous experience with many miles of smaller pipe lines laid all over the oil fields had led us to hope that we could also lay the main line above ground and so minimise corrosion. But in spite of laying the line so as to give it all the "play" possible, and the insertion of a large number of expansion joints, it was found, after the upper section was laid, that it was really necessary to bury the line, and this was accomplished at a comparatively small cost, and without having to unscrew the portion of the line already laid.

I had the pleasure and satisfaction of taking another trip to India and Burma towards the end of last year, and visiting the company's properties and principal agencies there. It was three years since my last visit, and in the interval there had been great developments in many directions in the company's business and operations; and what I said to you after my return from my previous trip as to my gratification with what I saw on my tour of inspection, and my opinion of the great value and complete equipment and organisation of the company's properties and business, I can reiterate with renewed emphasis to-day. I was specially gratified with the signs of keenness in the company's interests displayed in every branch of the business by those who are responsible for and carrying on the company's daily operations, and I would confidently ask you to authorise me to convey to them all your hearty thanks for their continued untiring efforts on your behalf, of which I had such unmistakable evidences during the course of my tour.

I now turn to a subject which—while it has only been brought prominently to your notice comparatively recently—has been engaging your directors' serious attention for quite a long time past—I refer to Persia. It was early in 1905 that Mr. D'Arcy's Persian concession was first brought to our notice, under such circumstances and through such channels as forced us to give the question of taking an active interest in it our most earnest consideration. From the unanimous opinion of the geological and oil experts who had from time to time visited and reported on only comparatively a very small portion of the territory covered by the concession, and from the result of the boring operations already carried on by Mr. D'Arcy in the north, it was apparent that there was every reason to believe that the concession embraced large areas of prolific oil-bearing land, and we were face to face with the alternative of either actively interesting the Burmah Oil Co. in the concession, or allowing it to go into other—probably foreign—hands, and running the risk of having a great oil field developed by opponents at the very door of India. After mature deliberation we decided that—even if we left out of consideration the prospects of making profits in Persia—the latter risk was too grave, and that, as a protective measure alone, it was our duty to keep the concession out of the hands of others. In conjunction with Lord Strathcona, who was induced to interest himself in the matter from an Imperial point of view, we formed the Concessions Syndicate, through which the Burmah Oil Co. secured a large interest—to be quite exact, $\frac{38}{100}$ths—in Mr. D'Arcy's concession. With an account of the operations of the syndicate I need not weary you ; suffice it to say, that when last year we concentrated our boring operations on the Musjid-i-Suleiman district the wells we were drilling there speedily began to shew in unmistakable fashion that the high opinions formed by the experts as to the probable richness of that field alone were to be confirmed by the convincing testimony of the drill. The next step was, in conjunction with Mr. D'Arcy and Lord Strathcona, to form a company to work the concession on a large commercial scale. The agreement originally made with Mr. D'Arcy provided for him and those who had acquired certain interests from him in the concession having right to twelve-twentieths of the whole shares of the company originally proposed to be formed to work the concession, but your board came to be of the opinion that it was highly desirable that the Burmah Oil Co., Ltd., should acquire the predominant interest in the concession and in all companies working it. They accordingly resolved to endeavour to buy out the interests of Mr. D'Arcy and the other parties associated with him. After prolonged negotiations, Mr. D'Arcy, on behalf of himself and these other parties, finally agreed to accept 170,000 ordinary shares of the Burmah Oil Co., Ltd., (ex-dividend for 1908), for their interests in the concession, he being also repaid his out-of-pocket expenses in connection therewith. To maintain Lord Strathcona's proportionate interest, he purchased from the Burmah Oil Co., Ltd,, one-twentieth of the interests acquired from Mr. D'Arcy for a proportionate equivalent in cash of the price given to Mr. D'Arcy. Arrangements were thereafter made for the formation of the Anglo-Persian Oil Co., Ltd., to acquire the whole interests in the concession. By the policy we have pursued, gentlemen, we have not only secured for the Burmah Oil Co. the predominant interest in what we firmly believe to be this great oil concession, but we have also secured for the British empire what we have every reason to believe will in time prove a great national asset, and we have prevented the possibility of its falling into the hands of foreigners. Such, gentlemen, are briefly the facts that led up to the formation of the Anglo-Persian Oil Co., the prospectus of which went so fully into every detail connected with the concession and the aims and objects of the Anglo-Persian Co., that I do not feel I can in any way amplify it here. We have with us here as usual to-day our adviser, Sir Boverton Redwood, who, if any shareholder would like to ask any questions of a technical nature, will be very glad to give information with regard to same.

As regards prospects for the present year, these are on the whole favourable at the moment, though profits will be affected by the considerable drop in the price of wax and candles and the heavy fall in the price of kerosene in India during the months of March and April. Fortunately, towards the end of the latter month there was a substantial recovery in the price of kerosene, and it is to be hoped there will be no recurrence of the war of rates. But there is a factor which must not be entirely ignored, viz., that competition from companies recently started in Burma will probably have an unfavourable effect on prices. Our profits are so largely governed by the course of the kerosene market in India that it is quite impossible to attempt to prophecy results for any time ahead, and all I can say is that the present outlook gives reasonable grounds to hope that in due course the directors will be able to present a satisfactory profit and loss account for 1909. Just one other point I would like to touch on before I sit down. I understand that some of our shareholders think that we might have arranged to give our own shareholders the entire benefit of this Persian scheme by raising all the capital wanted for it ourselves. I can only say, gentlemen, that it was impossible to do this, for we were forced by legal and other considerations to float an entirely separate company and make it a public issue. And I do feel sure that the great majority of our shareholders will sink the question of any comparatively small personal loss they may think they have sustained through the issue having been made a public one, and will congratulate the directors on their success in forming such a powerful company as the Anglo Persian Co.

The Chairman then proposed that the report of the directors and audited statement of accounts, including balance sheet and profit and loss account to 31st December, 1908, should be received, approved and adopted.

After Mr. Robert King had formally seconded the resolution, the Chairman called for questions or comments on the part of the shareholders.

No shareholders having risen to ask questions or make observations, the Chairman formally put to the meeting the resolution already proposed and seconded, and it was unanimously adopted.

On the motion of the Chairman, seconded by Mr. John Lochhead, the following dividends and bonus recommended by the directors, and which have already been detailed in the Review, were approved of and declared.

Messrs. Robert Gourley and James Hamilton were re-elected as directors, and Mr. W. K. D'Arcy was elected to fill the vacancy on the board caused by the retiral of Mr. John Innes.

Mr. R. A. Murray, C.A., was re-elected as auditor of the company, his remuneration to be 150 guineas.

A resolution that those of the directors who were not remunerated otherwise than by their ordinary directors' fees should receive—as has been the case for the two previous years—an extra £200 each for their services during 1908 was proposed by Mr. E. R. Crawford and seconded by Mr. W. J. Paul.

Mr. Young moved the previous question and was seconded by Mr. J. P. Hay, whereupon the Chairman, speaking on behalf of the directors interested, said that in previous years the resolution was accepted unanimously, and that, as on this occasion, it was not accepted unanimously, the directors in question would prefer that the resolution be withdrawn by the mover. Mr. Crawford consented to this course being taken.

This being all the business, the Chairman thanked the shareholders for their attendance, and the proceedings closed with a vote of thanks to him for his conduct in the chair.

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The British Welding Company, Limited.—An interesting brochure has recently been issued by The British Welding Co., Ltd., of Motherwell, N.B., and 25, Victoria Street, Westminster, S.W., giving details of their welded pipes for pipe lines, etc. It is pointed out that a large plant has been laid down at Motherwell for the manufacture of welded steel pipes up to six feet in diameter and 52 feet in length, and that the demand for this class of pipe is now considerably on the increase.

GULF REFINING CO.,
Refiners of Oklahoma and Texas Petroleum.

We make a Speciality of
SUPERIOR LUBRICATING OILS OF HIGH VISCOSITY AND LOW COLD TEST.

Our Kerosene and Gasoline are manufactured from high grade Oklahoma Crude Oil.

Prompt Shipments from New York, Philadelphia, Boston, New Orleans and Port Arthur, Texas.
Special Prices to Large Jobbers and Refiners
CORRESPONDENCE SOLICITED.

General Sales Office—FRICK BUILDING ANNEX, PITTSBURGH, PA., U.S.A.
European Representative—H. E. WATSON, 10, RUE THIMONNIER, PARIS, FRANCE.

A Prospectus has been filed with the Registrar of Joint Stock Companies, which states amongst other things that:—

NO UNDERWRITING COMMISSION HAS BEEN OR WILL BE PAID.

The List of Applications Opened Last Wednesday, the 19th day of May, 1909, and Will Close on or before Monday, the 24th day of May, 1909, at 4 p.m.

MOTOR FUEL PROPRIETARY, Limited.

(*Incorporated under the Companies Acts*, 1862 *to* 1907).

Share Capital - £100,000 • 6 Per Cent. Debentures = £30,000

(*Divided into 100,000 Shares of £1 each*).

ISSUE OF 50,000 SHARES.

The 50,000 Shares now offered, will be payable as follows:—**5s. per Share on Application. 5s. per Share on Allotment.**, and the balance as and when required, but no call to be made until three months after allotment.

DIRECTORS.

J. Browne Martin, 36, Victoria Street, Westminster, S.W., Landowner.

J. G. Ohlenschlager, Shanghai House, Botolph Lane, E.C., Merchant.

W. Miall Green, 50, Christchurch Road, Streatham Hill, S.W., Gentleman.

Paul Dvorkovitz, 45, St. Mary Axe, E.C., Consulting Chemist.

BANKERS.

London and County Banking Co., Ltd., 27, St. Mary Axe, E.C.

BROKERS.

Moy, Hardman and Vandervell, 19, Old Broad Street, E.C., and Stock Exchange. London.

SOLICITORS.

Light and Fulton, 1, Laurence Pountney Hill, Cannon St., E.C.

AUDITORS.

Pannell and Co., C.A., 13, Basinghall Street, E.C.

SECRETARY AND OFFICES.

Geo. W. Askew, F.C.I.S., 14, St. Mary Axe, London, E.C.

This Company has been formed for the purpose of acquiring and it has acquired a controlling interest in a going concern, established under the name of Motor Fuel, Limited, which was formed for the purpose of distilling, refining, importing, and marketing Petroleum Motor Spirit, refined Lamp Oils, Liquid Fuel, etc.

Motor Fuel, Limited, has leased a refinery at Ploesti, Roumania, built on about 11 acres of freehold land within the city boundary. Extensive additions have recently been made, at considerable expense, enabling the treatment of 40,000 tons of crude oil per annum. These additions consist of the very latest improved system of distilling. The unoccupied area is ample to enable considerable extensions to be made to meet future requirements.

An option to purchase the freehold of the refinery for the sum of £30,000, payable as to £10,000 in Ordinary Shares, £15,000 in Debentures, and £5,000 in cash, has been granted for three months from the 3/16 March, 1909, to Paul Dvorkovitz, and is held by him on behalf of this Company.

The refining industry in Roumania is a profitable one, and at present there are more than 60 refineries, where a total of 1,011,616 tons of Crude Oil was treated last year (*Moniteur de Petrole Roumain*, 6th March, 1909), for the purpose of producing Motor Spirit, Lamp Oils, and Liquid Fuel.

The Roumanian Government introduced a law last year by which the Roumanian refineries are prohibited from unfair competition, and a minimum price is fixed under which no refinery has the right to sell Lamp Oil for local consumption. Also the necessary quantity for home consumption is allotted in accordance with the refining capacity.

To Motor Fuel, Limited, the Government has allotted 2½ per cent. of the quantity of Lamp Oil required for home consumption.

The refined Lamp Oils and Liquid Fuel are readily sold in Roumania, the Motor Spirit is exported to England and distributed through the Sole Agents of Motor Fuel, Limited, the Homelight Oil Company, Limited, which Company possesses over 200 branches in this country.

Motor Spirit has, until Motor Fuel, Limited, was formed, been marketed principally by two powerful companies, one importing and selling American Spirit known as Pratt's Spirit, and the other selling a Spirit known as "Shell." The Homelight Oil Company, Limited, is the only other large distributing company in this country possessing similar extensive selling organizations to the two above-mentioned companies.

Motor Fuel, Limited, as lessees of a fully-equipped refinery and purchasers of crude oil direct from the wells, are placed as refiners, in a most favourable position to compete in this market with their products.

The Motor Spirit which Motor Fuel, Limited, now sells is a double refined one, being specially prepared for English requirements, and sold under the registered name "BENVIS." Upwards of half a million gallons have been already imported to England.

The quality of "Benvis" is acknowledged by leading motorists in this country as a spirit which fulfils all reasonable requirements.

Although "Benvis" was only placed on the market recently, several races have been won by users on sea and land.

The imports of motor spirit (petrol) into this country since 1904 have increased considerably, as will be seen from the following figures, which are taken from the Customs House Returns:—

During	
1904	11,767,530 gallons.
1905	18,225,040 ,,
1906	26,744,013 ,,
1907	33,497,512 ,,
1908	39,228,430 ,,

It will be seen that the increased importation of petrol into this country during 1908 over 1907 was 17 per cent., while as compared with 1904 it shows the enormous increase of nearly 285 per cent.

The following is an estimate based on the actual working at the Refinery and on Roumanian prices, prepared by Dr. Dvorkovitz, the Company's technical Director, for treating 40,000 tons crude oil, from which the products as below will be received:—

EXPENSES.

Taking average cost of crude at £1 16s. per ton: 40,000 tons	£72,000
Labour, administration, and repairs	6,000
	£78,000

INCOME.

Motor Spirit, 10,000 tons (equal to 3,000,000 gallons) ..	£36,000
Lamp Oil for export and local consumption, 12,800 tons	37,040
Liquid Fuel, 13,200 tons (4,000 tons used for fuel, and loss by refining)	21,120
	£94,160

PROFIT.

Thus the net profits, by selling all the products received at prices now ruling in Roumania, are estimated to be equal to about £16,000. For obvious reasons the details of costs of transport, landing, and delivery are not given, but the Directors are confident that from the sale of the quantity that the Company is able to produce, viz., 3,000,000 gallons per annum, the profits realised in England should, on a conservative estimate, be at least 1d. per gallon more than by selling the Motor Spirit in Roumania, and thus it would be seen that the Company will have a substantial revenue.

The purchase price of the interests to be acquired in Motor Fuel, Limited, amounts to £23,162, payable entirely in fully-paid shares of this Company.

The proceeds of the present issue, with the exception of the flotation expenses, will be devoted entirely to Working Capital.

The agreement for the purchase of the interests in Motor Fuel, Limited, is dated the 14th January, 1909, and is made between Paul Dvorkovitz on behalf of himself, and all other the holders of shares in Motor Fuel, Limited, of the one part, and George W. Askew on behalf of this Company of the other part. This agreement provides for the exchange of Shares in Motor Fuel, Limited, for Shares in this Company on the following basis, viz., one fully-paid Preference Share, or four fully-paid Deferred Shares in Motor Fuel, Limited, for one fully-paid Share in this Company.

The agreement has been ratified by shareholders holding upwards of 92 per cent. of the Preferred and 95 per cent. of the Deferred Shares of that Company.

The agreement adopting the agreement last mentioned is dated the 30th April, 1909, and is made between Paul Dvorkovitz of the first part, George W. Askew of the second part, and this Company of the other part.

There has been no prior public issue of shares of this Company, but 2,000 shares have been allotted since the formation of the Company in March, 1909, and have been fully paid up. A commission of 10 per cent. in cash was paid in respect of 2,000 of such shares.

The Articles of Association provide that the qualification of a Director other than the first Directors shall be the holding of shares of the Company of the nominal value of £250, and that the remuneration of the Directors is to be such sum as shall from time to time be determined by the Company in General Meeting. In addition, whenever the profits of any year available for dividends on the Ordinary Shares shall be more than sufficient to pay a dividend at the rate of 10 per cent. on the capital paid up on the Ordinary Shares, the Directors shall be entitled to 10 per cent. of the surplus profits of such year, and such further remuneration shall be divided amongst the Directors as they may determine.

Copies of the Memorandum and Articles of Association of the Company and of the above Contracts can be inspected at the Office of the Company at any time during business hours.

A brokerage of 3d. per share will be paid by the Company on shares applied for and allotted on applications identified as coming through brokers and approved agents.

Prospectuses and Forms of Application may be obtained from the Head Office and Branch Offices of the London and County Banking Company, and from the Solicitors, the Brokers, and the Company's Offices.

London, *11th May, 1909.*

AMERICAN NOTES.

More Mexican Fields.—Very good indications of oil have recently been discovered in the State of Campeche, Mexico, and American investors are now acquiring large blocks of territory.

Excitement.—Considerable excitement has lately been caused in the section about Punxsutawny, Pa., by the announcement that drillers on the Brown farm have struck a well some short distance from Big Run, which is producing at the rate of 100 barrels daily.

The Standard's New Refinery.—Matters are progressing as rapidly as is possible in connection with the Standard Oil Co.'s new refinery at Baton Rouge. The first car load of material for the refinery arrived on the site on the last day of April.

Extension of the Sunset Field.—The Sunset field of California has recently been extended by the bringing in of three flowing wells upon the property of the Union Oil Co. These wells are situated outside territory that has been hitherto proved to be oil-bearing.

A Good Spindle Top Well.—Spindle Top gives occasional evidence of its ability to still claim to be a very productive field. A few weeks ago a well which is now giving 400 barrels per day was brought in on the "flats." The owners are Messrs. McReynolds, Benckenstein and associates.

Operations Discouraged.—Operations in Kentucky have recently been discouraged by the cut of five cents in barrel prices. When the crude oil price fell to 90 cents, there was a noticeable slackening of activity, and now with another drop to 85, the development will materially tend to less activity than ever.

The Oil Shales of New Brunswick.—Dr. Ells, of the Geological Survey, has declared that not only are the New Brunswick oil shales most extensive, but the quality of the shale is far superior to Scotch shale. The shale district extends over an area 70 miles in length, and no less than seven seams have been discovered.

The Union and the Isthmus.—As will be noticed from a special article which appears elsewhere in this issue, the Union Oil Co. of California has been relieved by the Government from paying $500 per month to the Panama school fund, and will henceforth receive $1 10 instead of 90 cents per barrel for the railroad and canal oil fuel.

The Rotary Drill in California.—The Standard Oil Co. in its operations in the Midway field has gone in extensively for the rotary drill. Despite comparative slowness so far, the officials are encouraged by the progress achieved. California drillers have learned to work the rotary, and now have taken the places of the Louisiana and Texas drillers who have formerly operated the rotary.

Activity in Eastern Oregon.—Development work in the Malheur oil and gas fields of Eastern Oregon is being pushed forward with vigour, and at the present time seven rigs are in operation. One well in the district has recently struck a gas pocket, and the well is now yielding nearly 4,000,000 cubic feet of gas daily. A rotary is to be installed, and the well is to be deepened, for the indications for oil are very good.

The Famous Dos Bocas Well.—This remarkable Mexican well, which burned for several months, and defied the efforts of hundreds of Government men to shut off the flames, to-day lives in more than name only. It is now flowing with salt water, which it is discharging at the rate of several million gallons daily. The crater, which was formed where the mouth of the well originally was, continues to widen, and now covers 35 acres. It is said that the oil territory for a considerable distance round the well has been destroyed.

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ANGLO-MEXICAN OILFIELDS, LIMITED.

The Manager reports by cable as follows:—Borehole No. 3: depth 1,338 feet; increase 49 feet; formation, soft grey sandrock. Gas has been struck in large quantities at 1,319 feet. Borehole No. 4: depth 938 feet; increase 180 feet; formation, soft mixed shale. Borehole No. 5: depth 397 feet; increase 135 feet; formation, soft grey sandrock. Gas has been struck in large quantities at 394 feet.

THE GERMAN PETROLEUM MARKET DURING 1908.

According to the report of the Berlin Chamber of Commerce there was little change noticed in the petroleum market during 1908. The prices for American products were slightly higher than those of the preceding year. Although the interior situation in Russia is now much better, there was no increase in the kerosene imports. On the contrary, the importation and consumption of Russian products during 1908 were less than those of 1907. The importation from Roumania diminished during the year as Roumanian oil could be sold at more beneficial prices in other countries. The consumption of Austrian oil increased in consequence of its cheaper price, the quality of the latter having materially increased. The German railways have strengthened their stocks by purchasing Austrian oil. It is the American "Water White" which has the greatest consumption in Germany, especially in Berlin.

During 1908 the benzine trade was not wholly satisfactory. The demand for benzine remained stationary, but the offer was considerably augmented, as the Austrian trade policy was to import all the Austrian surplus in benzine into Germany and there dispose of it at very low prices. This condition brought about a considerable lowering of the prices of benzine, so that at the end of 1908 they were 30 per cent. lower than at the end of 1907. This has greatly damaged the trade, as all the contracts have been made at the higher prices.

As regards crude oil, most of the negotiations concluded were for Austrian and Dutch-Indian oil, and less for Roumanian and Russian.

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PETROLEUM DEVELOPMENTS IN CHILE

The American Consul—Mr. Alfred A. Winslow—of Valparaiso, furnishes some information concerning the borings for oil in one of the Chilean provinces, and the outlook for American petroleum to be used for fuel. He says that the La Compania Petrolos del Pacifico, with headquarters at 165, Calle Bandera, Santiago, Chile, has been boring for oil in the Province of Carelmapu, about 500 miles south of Valparaiso, with fair results. The work has been in charge of D. H. MacMillen, an American engineer. A depth of 1,050 feet has been reached without finding any body of petroleum, although indications point strongly toward favourable results, for at several points layers of clay and sand were found impregnated with petroleum. It is understood that the work will be pushed as soon as suitable drilling machinery can be installed. Natural gas has been found in this vicinity in several places with sufficient force to run a cook stove and jets for lighting purposes, and coal has also been found in that part of Chile.

Petroleum is now being imported to a limited extent into Chile from California, and used as fuel by the Taltal railway, about 500 miles north of Valparaiso. Others have under consideration the use of petroleum for fuel, and it seems there should be a good opening since coal is very high and large quantities are imported.

The American Oil Market.

New York, Week ended May 8th.

Of primary consideration in the week's review is the reduction of five cents in the credit balance postings of crude, of nearly all of the Eastern fields. The change in the Pennsylvania schedule probably occasioned the most comment, the previous rates having remained unusually steady for more than two years. The former basis for the Lima grades had been unvaried for more than one year. The decline in the Somerset, Ky., product was the second of the current year. Ragland, Ky., crude was not affected by the late revision. The general reduction in the fields producing the most valuable varieties of petroleum, has, says the *Oil, Paint and Drug Reporter*, been freely associated with the overproduction of the Illinois and Mid-Continent sources, and the decreased outlet for all petroleum products. Crude from the Illinois and Mid-Continent fields is not nearly so rich in its yield of refined and distillates as that of the Pennsylvania classification, but supplies from the former section have accumulated to such an extent as to exercise its influence generally. In the Eastern, Southern, and Middle Western fields, it is estimated that more than 90,000,000 barrels are held by the various pipe lines, the largest amount in the history of the country's industry. The Pennsylvania production has, on the other hand, shewn a steady decrease during recent years, and the maintenance of prices within the last two years was undoubtedly for the purpose of sustaining development work. It is yet too early to note any change in field operations, in consequence of the reduction, but there is little doubt that nearly all of the work that had been planned in the regular districts for the season, when drilling can be most favourably prosecuted, will be undertaken. The effect of the less promising market for crude may be evidenced upon operations of a more venturesome character.

Refined and Products.—The local market for refined has followed uneventful lines during the interval, and values are apparently steady in all positions, although the reduction in the crude schedule may have influenced the general tone of the market. The outlet into foreign channels so far this year is below that of the corresponding period of last year at nearly all ports. The export movement during the week from the local port comprised 9,874,190 gallons, of which 3,900,000 gallons were carried in bulk, against a total of 11,570,330 gallons for the former week. The only engagement reported for forward account during the week was one of 85,000 cases, New York shipment to Rangoon, August. There has been no feature to domestic trading. The demand for motor requirements constitutes the principal activity in the local market, for the products and supplies are kept steadily into consuming channels. Values rule with apparent steadiness for all descriptions. Clearances of naphtha for the week totalled 489,890 gallons, against 3,782,270 gallons, formerly recorded. Clearances of residuum amounted to 19,750 gallons, against 2,500 gallons as previously. The following represent the shipments of crude, refined and naphtha in bulk and in chartered vessels from the local port, for the week ending May 7th:—The French barque, "Quevilly," for Rouen, with 1,328,375 gallons crude; the German tank steamer, "Phœbus," for Flushing (for orders) with 2,510,000 gallons refined; the British steamer, "Falls," of Moness, for Bangkok, with 80,000 cases refined, and to Newchwang with 100,000 cases refined; the German steamer, "Walkure," for Wellington, Lyttelton, Dunedin, and Auckland, with 119,680 cases refined, and 29,660 cases naphtha; the French barque, "France Marie," for Marseilles, with 850,985 gallons crude, and the German steamer, "Willkommen," for Flushing (for orders) with 1,390,000 gallons refined.

CLOSING QUOTATIONS.

Crude at the Wells.

The quotations for oil represented by credit balances were:—

	Week ended	
	May 8. 1908.	May 8 1909.
Pennsylvania	$1·78	$1·73
Tiona	1·78	1·73
North Lima	1·04	0·99
South Lima	0·99	0·94
Indiana	0·99	0·94
Illinois, heavy, below 30 deg.	0·60	0·60
Kansas and Indian Ter., 32 deg. and above	0·41	0·41
Heavy	0·28	0·28
Humble, Tex.	0·64	0·54
Saratoga	0·61	0·53
Sour Lake, Tex.	0·64	0·53
Jennings, La.	0·67	0·54
Santa Maria	—	1 00
Coalinga	—	0·60
Canadian Oil:—		
Petrolia	1·44	1·39
Oil Springs, less pipeage	1·51	1·51

Refined—For Export.

In cents.	Week ended May 8	
	S.W. 110 test.	W.W. 150 test.
Barrels, cargo … per gal.	8·50	@10·00
Philadelphia	8·45	@ 9·95
Bulk, New York	5·00	@ 6·50
Bulk, Philadelphia	4·95	@ 6·45
Cases, New York	10·90	@12·40
Cases Philadelphia	10 85	@12·35

Refined in Cases—110 Fire Test.

	Week ended	
	May 1. 1909.	May 8. 1909.
3,000 to 10,000	11·05	11·05
1,000 to 3,000	11·10	11·10

Refined—Jobbing Lots

In barrels, pkgs. included.

	Week ended	
	May 1.	May 8.
130 fire test, S.W.	11¾	11¾
150 fire test, W.W.	12¼	12¼
In bulk from tanks	9	9
200 fire test	13@13¾	13@13¾

Naphtha and Gasolene.

	Week ended	
	May 1.	May 8.
Naphtha, V. M. and P. deod.	11	11
Gasolene, 86 deg.	21¾	21¾

Pennsylvanian Oil Runs from April 29th to May 5th were:—April 29th, 106,811; April 30th, 229,387*; May 1st, 39,371; May 2nd, 51,618*; May 3rd, 203,195*; May 4th, 178,495 and May 5th, 300,689.*

* Includes Illinois Oil.

The Deliveries of Pennsylvanian Oil from April 30th to May 6th were:—April 30th, 156,221; May 1st and 2nd, 348,825; May 3rd, 197,650*; May 4th, 237,219*; May 5th, 188,646*; and May 6th, 217,267*.

* Includes Illinois Oil.

Clearances for the Week.

During the week ended May 7th and since Jan. 1, the clearances of petroleum, in gallons, from the port of New York, were as follows:—

	Week.	Year.	1908.
Refined	9,874,190	195,301,330	210,469,075
Crude	2,255,220	13,092,700	7,845,810
Naphtha	489,890	14,576,070	3,802,505
Residuum	19,750	202,220	644,500

Export Statistics.

The total exports from the port of New York and from the United States have been:—

	Gallons.
From New York, week ended May 7th	15,420,807
Total from New York, from Jan. 1st, 1909	273,495,474
Same period last year	288,471,244
Decrease	14,975,770
From United States, week ended May 7th	19,113,680
Total from United States, since Jan. 1st, 1909	462,595,226
Same period last year	525,710,618
Decrease	63,115,392

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The "Review" Shipping List.

May 21, 1909.

(*The following abbreviations are used in this table:*—L. Left; P. Passed; Arr. Arrived; Sp. Spoken; Tr. Trading.)
Anglo-American Co.'s vessels marked thus (□): the Anglo-Saxon Co.'s tankers thus (*): and Messrs. Lane and Macandrew's thus (†).

Vessel.	From.	For.	Latest Date and Position.
ALCHYMIST	Marseilles	Antwerp	P. Gibraltar, May 17
ALICE ET ISABELLE (Fr. bq.)	—	—	In Port Rouen, April 5, laid up
AMERICAN	Tyne	New York	Arr. May 18
APPALACHEE □	Sabang	U.S.A.	L. April 24
APSCHERON	Tyne	Batoum	Arr. May 15
ARAL	—	—	In Tyne, laid up
ARAS	Batoum	Amsterdam	P. Beachy Head, May 18
ASHTABULA □	Hong Kong	San Francisco	At Kobe, May 18
ASTRAKHAN	Tyne	Philadelphia	Arr. May 17
AUGUSTA	London	Southend	Arr. May 1, ld. up
AUGUST KORFF	New York	Flushing	L. May 10
AUREOLE	London	New Orleans	L. May 20
BAKU STANDARD	—	—	In Port Cardiff, May 18
BALAKANI†	Philadelphia	London	P. Dover, May 20
BATOUM	Tyne	Port Arthur (Texas)	P. Scilly, May 8
BAYONNE	St. Louis (Rhone)	Philadelphia	Arr. May 18
BEACON LIGHT	Tyne	Kustendje	P. Dover, May 18
BLOOMFIELD	Manchester	Liverpool	Arr. May 4, in Port, May 19
BORJOM	Batoum	Alexandria	Arr. April 13, in Port, May 7
BRILLIANT	Philadelphia	Gothenburg	P. Del. Break., May 7
BROADMAYNE	Tongsberg	Tyne	Arr. Feb. 13, in Port, May 18
BUFFALO	Rotterdam	New York	Arr. May 20
BULLMOUTH*	Madras	Calcutta	Arr. May 15, in Port, May 18
BULYSSES*	Singapore	—	P. Perim, May 16
BURGERMEISTER PETERSEN	Oxelosund	Philadelphia	Sd. Tyne, May 7
BUYO MARU	Yokohama	Lobitos	Sd. Payta, April 19
CADILLAC	Philadelphia	Calcutta	At Port Said, May 13
CALCUTTA (B. b.) □	San Francisco	Shanghai	L. April 8
CAPTAIN A. F. LUCAS (with S.O. Barge 95)	Rotterdam	New York	P. Lizard, May 20
CARDIUM*	Singapore	Europe	Sd. Sabang, May 5
CARPATHIAN†	Rotterdam	Port Arthur	P. Dover, May 11
CAUCASIAN†	London	Port Arthur (Texas)	P. Dover, May 15
CHARLOIS	Amsterdam	—	Off the Wight, May 19
CHESAPEAKE □	Tyne	New York	P. Dunnet Head, May 11
CHESTER	Kustendje	Antwerp	Arr. May 12, in Port, May 17
CHEYENNE	Savona	Philadelphia	Arr May 9
CITY OF EVERETT (with S.O. Barge 94)	Portland (Me.)	Charleston	Sd. Del. Break., May 1
CIUDAD DE REUS	New York	Valencia	L. May 8
CLAM*	Freshwater	Ancon	L. May 6
CONCH	Batoum	—	P. Constant'ple, May 17
CONRAD MOHR	—	—	In Tees, May 17
COWRIE*	Freshwater	Woosung	At Shanghai, May 12
CUYAHOGA □	New York	Bombay	L. May 9
CYMBELINE	Portland	Penarth	Arr. April 17, in Port, May 18
CZAR NICOLAI II.	Hamburg	Batoum	P. Ushant, May 16
DAGHESTAN	Antwerp	Batoum	P. Zeebrugge, May 13
DAKOTAH □	San Francisco	Moji	L. April 24
DANUBIAN	Newport Nws	Amsterdam	Arr. May 18
DELAWARE □	Barrow	New York	L. May 18
DERBENT	Tyne	Batoum	P. Constant'ple, May 17
DEUTSCHLAND	New York	Rotterdam	L. May 11
DIAMANT	Hamburg	Philadelphia	P. Scilly, May 16
EDWARD DAWSON	Hull	New Orleans	Sd. Portland, May 6
ELAX*	Kurrachee	Bombay	Arr. May 8
ELISE MARIE	Philadelphia	Stettin	Arr. May 19
EL LOBO	Payta	Campana	Arr. April 25
ENERGIE	Hamburg	Philadelphia	P. Beachy Head, May 19
ERIVAN	Tyne	Philadelphia	L. May 17
ETELKA	Bordeaux	Kustendje	S. Algiers, May 15
EUPLECTELA*	Balekpappan	Shanghai	Sd. Chingkiang, May 15
EXCELSIOR	Hamburg	New York	P. Scilly, May 17
FRANCE MARIE (French bq.)	New York	Marseilles	L. May 6
GEESTEMUNDE	Tyne	Philadelphia	Arr. May 18
GENESSE □	Philadelphia	Queenstown	P. Del. Break., May 5
GEORGIAN PRINCE	—	—	In Tyne, laid up
GOLDMOUTH*	Samboe	Channel	S. Port Natal, May 1
GUTHEIL	Havana	Philadelphia	Arr. May 11
HAINAUT (Du. sh.)	Antwerp	New York	P. Prawle Pt., April 1
HARRY WADSWORTH	Hull	New Orleans	P. Lizard, May 9
HELIOS	Tyne	New York	P. Dunnet Head, May 12
HERMIONE	Rotterdam	Cardiff	Arr. Mar. 22, in Port, May 18
HESPERUS	Hamburg	New York	P. Lizard, May 13
HOTHAM NEWTON	London	Tees	Arr. April 10, in Port, May 17
HYRCANIA	Batoum	Hamburg	Sd. Constant'ple, May 14
IOANNIS COUTZIS	Cardiff	Piræus	Arr. Mar. 3, in Port, May 12
IROQUOIS □ (towing barge Navahoe)	London	New York	In Wireless Com., Browh'd, May 19
J. B. AUG. KESSLER	Bombay	Aroe Bay	Arr. May 12
JAMES BRAND	Cardiff	Port Arthur (Texas)	P. Sand Key, May 19
JOYO MARU	Philadelphia	Amsterdam	L. May 16
JULES HENRI (French bq.)	Cette	Marseilles	Arr. Mar. 26, in Port, May 13
KURA	Port Arthur (Texas)	Stockholm	Sd. Norfolk (Va), May 10
LA CAMPINE	Antwerp	Philadelphia	Arr. May 18
LA FLANDRE	Ghent	Philadelphia	P. Prawle Pt., May 15
LA HESBAYE	Batoum	Antwerp	Arr. May 7, in Port May 17
LACKAWANNA □	Barrow	New York	P. Fastnet, May 19
LANSING	—	—	At San Francisco, April 27
LE COQ†	Algiers	Philadelphia	L. May 16
LOUTSCH	Tyne	Novorossisk	S. Algiers, May 14
LUCERNA	Terdouck	Black Sea	Off the Wight, May 19
LUCIGEN	—	—	In Tyne, April 20, ld. up
LUCILINE†	—	Tyne	L. May 10
LUMEN	Oporto	Tyne	Arr. April 12, in Port, May 10
LUTETIAN†	Rouen	Tyne	Arr. May 10, in Port, May 18
LUX†	New York	Bilbao	Arr. May 19
MAKKAVEI	—	—	In Port Odessa, April 5
MANHATTAN	Batoum	New York	P. Gibraltar, May 12
MANNHEIM	Philadelphia	Copenhagen	L. May 13
MARGARETHA	Hull	Kustendje	At Gibraltar, May 19
METEOR	Batoum	Vladivostock	Arr. April 11
MEXICAN PRINCE	Tees	Nipe Bay	Arr. May 17
MINA BREA	Greenock & Cardiff	Callao & Talara	Sd. Las Palmas, April 30
MINHLA	Tyne	Rangoon	Arr. abt. May 5
MIRA	—	—	In Port Blyth, laid up
MUREX*	Karatzu	Singapore	Arr. April 17, in Port, April 22
NARRAGANSETT	London	New York	Arr. May 14
NEW YORK □	Rotterdam	New York	Arr May 13
NIAGARA	San Francisco	Madras & Calcutta	L. May 8
OBERON	Port Arthur (Texas)	Cardiff	Arr. May 15, in Port, May 18

Vessel.	From.	For.	Latest Date and Position.
OCEAN	Antwerp	Baltimore	P. Prawle Pt., May 16
OILFIELD	Portland	Port Arthur (Texas)	P. Lizard, May 17
OKLAHOMA	New York	Port Arthur (Texas)	L. May 11
ORIFLAMME†	Rouen	Kustendje	P. Ushant, May 11
OTTAWA □	Philadelphia	Genoa	P. Del. Break., May 7
OURAL	Genoa	Batoum	P. Constant'ple, May 15
PATELLA	Tyne	Port Arthur (Texas)	P. Lizard, May 8
PAUL PAIX	Hartlepool	New York	Arr. May 12
PAULA	Philadelphia	Amsterdam	L. May 15
PECTAN*	London	Tyne	Arr. April 21
PENNOIL	Philadelphia	Dover	P. Del. Break., May 8
PETROLEINE	Tyne	Philadelphia	L. May 18
PHOEBUS	New York	Hamburg	P. Dover, May 17
PINNA†	Muroran	Talara	L. April 30
POTOMAC □	New York & Trinidad	Buenos Ayres	Arr. April 13, in Port, April 17
PROGRESSO ARGENTINA (Ar. bq.)	Port Arthur (Texas)	Campana	Sp. Feb. 5 off Fowey Rks., Flda.
PROMETHEUS	New York	Rotterdam	L. May 11
PRUDENTIA	Liverpool	Tees	L. May 15
PURELIGHT	Philadelphia	Hamburg	Arr. May 8, in Port, May 16
QUEVILLY (Fr. bq.)	New York	Rouen	L. May 3
RENDOVA (Br. bq.)	New York	Corunna	Sp. May 6, 40 N., 64 W.
RION	Batoum	Avonmouth & Cardiff	P. Constant'ple, May 11
ROCK LIGHT†	Horta (Azores)	Galveston	L. May. 12
ROMANY*	Hankow	Shanghai	L. May 13
ROTTERDAM	Amsterdam	New York	Arr. May 16
ROUMANIAN†	Kustendje	Antwerp	L. May 19
RUSSIAN PRINCE	Tyne	Cienfuegos	L. May 8
SALAHADJI	Balekpappan	—	Sd. Colombo, May 18
SAN CRISTOBAL	—	—	In Port Liverp'l, May. 19
SAN IGNACIO DE LOYOLA (Sp. bq.)	New York	Pasages	Arr. May 13
SANTA MARIA	—	—	At Taltal, May 11
SANTA RITA	San Francisco	Pt. San Luis	L. April 27
SARANAC □	Venice	Sandy Hook	L. May 14
SAXOLEINE	Bordeaux & Dartmouth	New York	Arr. May 18
SCHUYLKILL	Cebu	Boston & New York	P. Gibraltar, May 9
SEMINOLE □	San Francisco	Woosung	Arr. April 24
SERVIAN†	Newport News	Antwerp	L. May 18
SNOWFLAKE	Flushing	Tyne	Arr. April 27, in Port, May 18
SOYO MARU	Yokohama	Uraga	L. April 4
SPONDILUS*	Cardiff	Singapore	P. Barry Island, April 24
STANDARD	Hamburg	Baltimore	Arr. May 16
STROMBUS*	Sabang	Europe	Sd. Las Palmas, May 15
SULTAN VAN LANGKAT	Balekpappan	Singapore	L. April 29
SUN	Sabine	Philadelphia	Arr. Mar. 27
SUNLIGHT (Br. bq.)	Foynes	Cardiff & Galveston	At Cardiff, May 18
SURAM	Blyth	Batoum	Arr. May 19
SUWANEE □	Barry	Philadelphia	At New York, May 14
SVIET	Batoum	Odessa	L. April 25
TAMARC □	London	New York or Philadelphia	In Wireless Com., Browh'd, May 14
TELENA*	Calcutta	Samboe	Arr. May 12
TEREK†	London	Kustenje	P. Dover, May 18
TEXAS	Port Arthur (Texas)	Philadelphia	Arr. May 5
TIFLIS	Batoum	Liverpool	L. May 16
TIOGA □	Manchester	Philadelphia	Arr. May 16, in Port, May 19
TONAWANDA □	Hong Kong	San Francisco	Arr. April 23, in Port, May 4
TRINCULO	Port Arthur	London	S. Newport News, May 7
TROCAS	Cochin	Soesoe	Arr. May 6
TUSCARORA	Sabang	U.K. or Cont.	At La Palmas, May 15
VEDRA	—	—	In Tyne, laid up
VILLE DE DIEPPE (Nor. bq.)	Philadelphia	Rouen	P. Del. Break., April 25
VOLUTE	Hong Kong	Balekpappan	L May 8
WASHINGTON	Singapore	Europe	At Port Natal, abt. May 4
WASHTENAW	—	—	At or near San Francisco, May 7
WEEHAWKEN	Kustendje	Alexandria	Sd. Constant'ple, May 12
WILLKOMMEN	New York	Danzig	L. May 7
WINNEBAGO	San Francisco	Moji	Arr. May 3

Latest Market Intelligence.

LONDON OIL MARKET.

Supplied by Messrs. Benjamin & Gee, 31, St. Mary Axe, E.C.

May 21st, 1909.

The latest quotations for Refined Petroleum are:—Russian, 6d.-6¼d.; American, 6¼d.-6⅜d.; Water White, 7¼d.-7⅜d.; Roumanian, 7d.

LUBRICATING OILS

are unchanged as follows:—

American pale, £6 10s. to £10 10s.
American dark cylinder, from £8.
American filtered cylinder, from £11 5s.
No. 1 Russian, for Spot, £8 2s. 6d.

TURPENTINE.

American Turpentine still fluctuates, but is now fairly firm at 27/9 for Spot; July/December, 28/3; September/December, 28/6.

LIVERPOOL OIL MARKET.

May 21st.

Refined oils are quiet, and sellers quote 6¾d., for Russian, Galician or Roumanian; and 7¼d. to 8¼d. per gallon for American.

Petroleum Spirit continues at 1s. 0d. to 1s. 2d. per gallon for duty paid lots, at which price there is a fair demand ruling.

LATEST AMERICAN PRICES.

New York, May 21st.

Refined, in cases, is steady at 10·90; Standard White, 8·50; Credit balances, 1·68.

Philadelphia, May 21st.

Standard White is now quoted at 8·45.

RUSSIA.

Baku, May 18th.

The Baku oil market remains unchanged. Crude oil, spot, 22 copecs per pood. Residuals, 22 copecs. Kerosene, in ships, 29½-30 copecs.

BELGIUM.

Antwerp, May 20th.

The petroleum market is firm. Price of Standard White, spot, 22 francs per 100 kilos.

FRANCE.

Paris, May 18th.

Illuminating oil is quoted in bulk, in whole tank waggons, 23·50 francs per hectolitre; spirit, 33·75 francs per hectolitre. Special white oil, in barrels or cans, 31·50 francs per hectolitre.

GERMANY.

Hamburg, May 15th.

The kerosene market is unchanged. The price of American Standard White is 7·20 marks per 50 kilos.; Galician, 6·75 marks. Russian and Roumania not offered.

HOLLAND.

Amsterdam, May 17th.

The petroleum market remains firm. American Standard White, spot, 12·20 florins per 100 kilos.

ROUMANIA.

May 17th.

	Francs.
Crude oil from different fields, including pipe line charges, per 100 kgs. ...	4·50–4·70
Refined oil, exclusive of taxes, ex. refinery...	8·70
Residuals in tank waggons, at refinery ...	4·30–4·35
Paraffin	120·00–130·00
Prices for Export.	
Refined oil, f.o.b., per 100 kgs.	7·25–7·75
Benzine, sp. gr. 0·710–0·715, f.o.b.	17–18
„ sp. gr. 0·715–0·720 „	17·50–15·50
„ sp. gr. 0·730–0·740 „	10–11
„ sp. gr. 0·745–0.755 „	9–10

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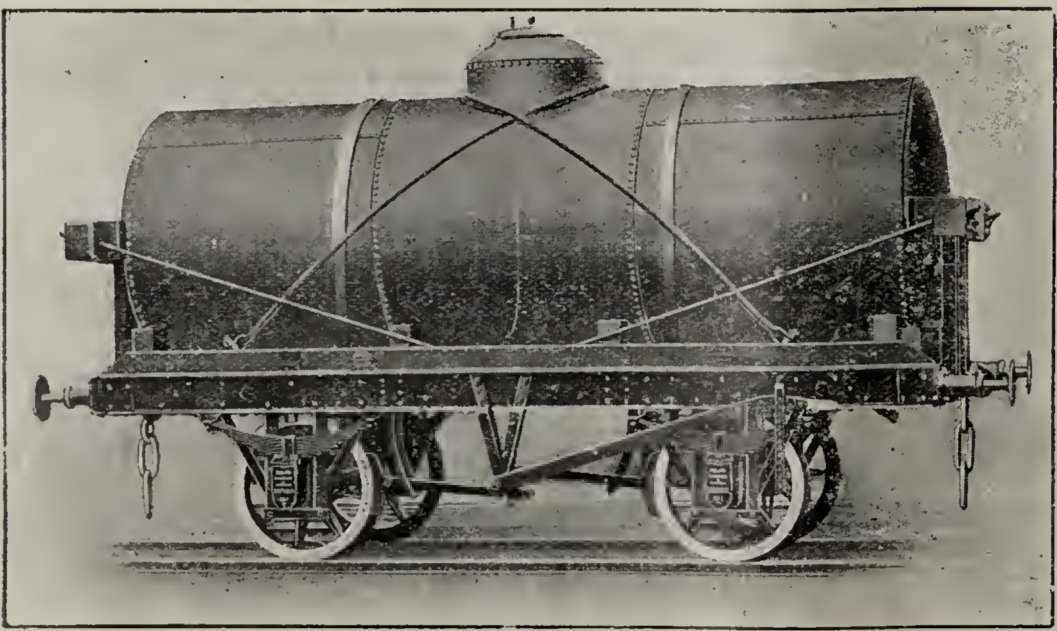
IMPORTS of PETROLEUM into UNITED KINGDOM

Specially prepared for this Journal by the Custom House.

FOR THE WEEK ENDED MAY 10TH, 1909—

Date.	Port and Importers.	Description.	No. of Gals.	Port Whence.
May	LONDON—			
4	Port of London Authority	Lub.	500	Hamburg
4	,,	,,	1,450	Baltimore
4	Anglo-American Oil Co.	,,	4,000	New York
4	Langley, Smith and Co.	,,	2,000	,,
4	Port of London Authority	,,	12,000	,,
5	,,	,,	40	Hamburg
5	J. R. Grant	,,	40	Brussels
5	British and Foreign Wharf	,,	600	Antwerp
5	Fielder, Hickman and Co.	,,	8,160	New York
5	,,	,,	50	,,
5	Anglo-American Oil Co.	,,	110,680	,,
5	,, (Tamarac)	Gas	1,636,600	Philadel.
5	W. H. J. Alexander	Lub.	3,290	,,
5	J. C. Goodall	,,	5,200	New York
5	Lunham and Moore	,,	2,600	,,
5	British Pet. Co. (Caucasian)	Gas	1,627,000	Pt. Arthur
6	Mordaunt Bros.	Lamp	10,000	Hamburg
6	T. H. Lee	Lub.	160	,,
6	Vacuum Oil Co.	,,	480	Riga
6	Page, Son and East	Lub. Oil and Gr.	680	Antwerp
6	A. Brown and Co.	Lub.	7,200	Philadel.
6	M. Record	,,	4,000	,,
6	Thames Tug & LighterageCo.	,,	9,960	,,
6	E. J. Walkinshaw	,,	4,000	,,
6	Schlieman's Oil Works	Lub. Oil and Gr.	5,200	,,
6	Grindley and Co.	Lub.	4,000	New York
6	J. Harrison, Ltd.	,,	130	Antwerp
7	G. Haller and Co.	,,	240	,,
7	Mordaunt Bros.	,,	20,650	Philadel.
7	Worthington and Boler	,,	4,200	,,
7	Produce Brokers	,,	14,400	,,
7	A Vaughan	,,	190	Hamburg
8	Argo Steamship Co.	,,	300	Bremen
10	Pickfords	,,	2,400	Hamburg
10	Van Dam and Co. (Theodor)	Gas	370,000	,,
10	Page, Son and East	Lub. Gr	120	Antwerp
10	Langley, Smith and Co.	Lub.	2,400	Philadel.
10	Bowring Petroleum Co.	,,	12,190	,,
10	J. W. Baker	,,	4,540	,,
10	Snowden Sons and Co., Ltd.	Lub.Gr.	2,630	New York
	LIVERPOOL—			
4	Liverpool Storage Co,	Lub.	31,800	,,
4	,,	,,	1,600	,,
4	G. B. Taylor	,,	59,760	,,
7	Burnaby and Chantrell	L.Comp.	40	Hamburg
7	Bramwell, Fern and Co.	Lub.	600	New York
7	W. B. Dick and Co.	,,	10,420	Baltimore
7	A. Hopps and Sons	,,	5,160	,,
7	Meade-King, Robinson & Co.	,,	7.720	,,
7	,,	,,	10,400	Hamburg
30/3	,,	Gas	9,160	Pt. Arthur
8	Pickfords	Lub.	70	Hamburg
8	Schlieman's Oil Works	Lub.	210	Hamburg
10	Penwarden and Jackson	,,	400	Antwerp.
10	C. W. Field	,,	210	,,
10	Burnaby and Chantrell	Lub. Gr.	1,460	New York
10	Valvoline Oil Co.	Lub.	820	,,
10	W. Gibson and Sons	Lamp	2,050	Boston
	BARROW—			
10	Asiatic Petroleum Co. (Lackawanna)	Mot.Spirit	1,010,440	Aroe Bay
10	,, ,,	Benzine	278,130	,,
	BRISTOL—			
5	First Anglo-Russian Oil Co.	Resid.	2,250	Hamburg
5	Pickford's	Lub.	810	,,
6	Anglo-Bosphorus Oil Co.	,,	250	,,
6	E. Stock and Sons	L.Paste	50	,,
7	,,	Lub.	920	,,
8	Pickford's, Ltd.	,,	800	Antwerp
	GRIMSBY—			
4	J. Sutcliffe and Son	,,	2,000	,,
	HARWICH—			
4	D. Howard	,,	490	,,
5	,,	,,	30	,,
7	,,	,,	270	,,
	HULL—			
4	W. Gilyott and Co.	,,	17,260	New York
6	Wilsons and N.E. Co.	,,	360	Hamburg
6	,,	,,	1,360	Antwerp
	MANCHESTER—			
4	G. B. Taylor	,,	1,200	New York
4	Crew, Levick and Co.	,,	6,840	Philadel.
4	,,	M. Colza	4,180	,,
4	J. T. Fletcher and Co.	Lub.	740	Antwerp
6	D. Currie and Co.	,,	360	Hamburg
7	W. W. Jones, Dooly and Co.	,,	2,600	Philadel.
10	C. H. Morton and Sons	,,	240	Hamburg
	NEWCASTLE—			
4	Tyne-Tees Steamship Co.	,,	2,400	Antwerp
8	,,	,,	2,920	,,
	NEWPORT—			
6	Mordey, Jones and Co.	Lub. Gr.	300	,,
	PLYMOUTH—			
4	T. Nicholson and Co.	Lub.	260	Hamburg
	SWANSEA—			
6	Letricheux and David	,,	40	New York
8	Richards, Turpin, and Co.	,,	2,400	,,
	SOUTHAMPTON—			
8	White Star Line	,,	30	,,
10	P. E. Curry	,,	2,700	,,
	ABERDEEN—			
4	R. C. Reid and Co.	Lamp	4,000	Hamburg



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IMPORTS.—(*Concluded*).

Date.	Port and Importer.	Description.	No. of Galls.	Port Whence
May	Glasgow—			
4	Clyde Shipping Co.	Lub. Gr.	670	Antwerp
5	Anchor Line	Lub.	27,400	New York
7	J. and A. Allan	,,	65,620	,,
7	,,	Lub. Gr.	490	,,
10	J. and P. Hutchison	Lub.	200	Rouen
	Grangemouth—			
4	J Currie and Co.	,,	2,080	Hamburg
5	W. Graham-Yooll and Co.	Lamp	3,880	,,
	Leith—			
4	J. Currie and Co.	Lub.	270	Hamburg
4	G. Gibson and Co.	,,	160	Antwerp
4	W. Thomson and Co.	,,	1,380	Reval
6	G. Gibson and Co.	,,	260	Antwerp
6	J. Currie and Co.	,,	1,200	Hamburg
8	,,	,,	80	,,
8	W. Graham-Yooll and Co.	Lamp	4,800	,,
10	,,	,,	2,700	,,
10	Geo. Gibson and Co.	Lub.	400	Antwerp
	Stornoway—			
6	C. F. Urlofsen	Lamp	1,000	Tonsberg
	Dublin—			
4	Alliance and Dublin Consumers Gas Co. (J. Brand)	Gas	470,390	Baltimore
25/3	Anglo-American Oil Co. (Cadillac)	Lamp	1,719,670	Philadel.
	Deduct to correct—		7,685,460	
	Belfast—			
15/4	Anglo-American Oil Co. (Potomac)	Lamp	11,770	New York
	Hull—			
27/4	T. Wilson, Sons and Co.	Lub.	22,280	,,
	Total for the Week		7,651,410	

FOR THE WEEK ENDED 17TH MAY, 1909—

Date.	Port and Importers.	Description.	No. of Galls.	Port Whence.
May	London—			
11	Petroles de Grosnyi (Lucerna)	Mot. Spirit	355,800	Novorossisk
11	Anglo-American Oil Co. (Iroquois)	Gas	340,660	New York
11	,, ,,	Lamp	2,050,640	,,
11	,,	Lub.	4,000	,,
11	Consolidated Petroleum Co. (Terek)	Gas	690,000	Kustendje
11	,, ,,	Lamp	720,000	,,
11	Townsend Bros.	Crude	310	Suez
12	Leach and Co.	Lub.	90	Havre
12	Port of London Authority	,,	3,090	Hamburg
12	Thomas and Bishop	,,	760	Philadel.
12	Anglo-American Oil Co. (Navahoe)	Naph.	2,086,830	New York
12	,, ,,	Benzine	675,480	,,
13	,,	Lub.	4,000	,,
13	,,	,,	39,400	Philadel.
13	Livett Frank and Son	,,	1,680	,,
13	J. Spurling	,,	240	New York
13	Page, Son and East	Lub. Oil and Gr.	600	Antwerp
14	Asiatic Petroleum Co. (Frisia)	Motor Spirit	377,830	Rotterdam
14	B. Jacob and Sons, Ltd.	Lub.	3,370	New York
14	Mordaunt Bros.	,,	6,300	Baltimore
15	Thompson, McKay & Co.	,,	80	,,
15	Scott's Wharf	,,	2,000	New York
15	Mercantile Lighterage Co.	Lamp	1,500	,,
15	T. H. Lee	Lub.	220	Hamburg
15	,,	,,	230	,,
17	,,	Lub. Gr.	120	,,
17	,,	Lub.	310	,,
17	,,	,,	40	,,
17	A. Brown and Co.	,,	560	,,
17	Port of London Authority	,,	4,100	New York
17	,,	,,	1,600	Baltimore
17	Produce Brokers' Co.	,,	4,800	New York
17	Page, Son and East	Lub. Oil and Gr.	360	Antwerp
	Liverpool—			
17	Valvoline Oil Co.	Lub	3,280	New York
17	G. B. Taylor	,,	720	,,
17	,,	,,	24,000	,,
12	Meade-King, Robinson & Co.	,,	10,400	Hamburg
12	,, (Prudentia)	Gas	915,900	Pt. Arthur
13	,,	Lub.	33,200	Philadel.
13	W. B. Dick and Co.	,,	10,270	,,
13	Geo. B. Taylor	,,	23,200	,,
13	American Line	,,	3,200	,,
13	Worthington and Boler	,,	5,400	,,
13	Crew, Levick and Co.	,,	17,390	,,
13	Bowring Petroleum Co.	,,	7,840	,,
14	Midland Railway Co.	,,	850	Philadel.
14	Davies, Turner and Co.	,,	140	Boston
14	Burnaby and Chantrell	Lub. Gr.	90	Hamburg
14	Bramwell, Fern and Co.	Lub.	2,210	Philadel.
17	Meade-King, Robinson & Co.	Lub.	4,800	Philadel.
17	,,	,,	1,000	Hamburg
17	R. Davidson and Co.	Lub.Gr.	400	,,
17	Schlieman's Oil Works	Lub.	630	,,
17	Pickford's	Lub. Oil and Paste	740	,,
17	C. C. Wakefield and Co.	Lub.Gr.	430	Antwerp
17	C. W. Field and Co.	Lub.	210	,,
17	J. T. Fletcher and Co.	,,	30	,,
17	Anglo-American Oil Co. (Tioga)	Gas	391,430	Philadel.
17	Valvoline Oil Co.	Lub.	25,010	New York
17	Vacuum Oil Co.	,,	18,000	,,
17	,, ,,	,,	25,960	,,
17	Cunard Steamship Co.	,,	26,000	,,
	Barrow—			
12	Anglo-American Oil Co. (Delaware)	Lamp	654,030	Philadel.
13	,, ,,	Naphtha	636,870	,,
	Bristol—			
11	H. R. James and Son	Lub.	20,000	New York
11	,,	M.Colza	7,600	,,
11	J. and R. Bush	Lub.	12,600	,,
12	Ford and Canning	,,	2,790	,,
12	F. F. Fox and Co.	,,	1,280	,,
12	Anglo-Bosphorus Oil Co.	,,	5,750	Hamburg
12	Pickfords	Lub. Oil and Paste	310	,,
12	E. Stock and Sons	Lub.	240	,,
15	F. Barnard	,,	10,400	,,
15	W. G. Clarke	,,	1,400	Antwerp
15	Pickford's, Ltd.	,,	240	,,
15	,,	,,	630	,,
15	H. R. James and Sons	,,	2,400	New York
17	J. and R. Bush	,,	26,800	,,
17	Ford and Canning	,,	2,590	,,
	Grimsby—			
13	J. Sutcliffe and Son	,,	170	Antwerp
14	,,	,,	480	,,
	Harwich—			
11	D. Howard	,,	540	,,
	Hull—			
11	T. Meredith, Roberts and Co.	,,	1,260	,,
11	Wilsons and N E. Co.	,,	1,140	,,
11	,,	,,	1,880	Hamburg
13	G. Hardy and Co.	,,	270	Antwerp
13	T. Wilson, Sons and Co.	,,	720	,,
13	,,	,,	1,200	Riga
14	,,	,,	106,040	New York
1/4	British Pet. Co. (Margaretha)	Spirit	740,000	Kustendje
	Manchester—			
11	D. Currie and Co.	Lub.	480	Hamburg
11	J. T. Fletcher and Co.	,,	710	Antwerp
14	Anglo-American Oil Co. (Tioga)	Gas	313,150	Philadel.
15	D. Currie and Co.	Lub.	240	Hamburg
15	George B. Taylor	,,	69,360	New York
17	C. H. Morton and Sons	,,	600	,,
17	Liverpool Storage Co.	,,	13,630	,,
17	,,	,,	1,500	,,
	Middlesbro'—			
11	E. Harrison and Co.	,,	2,000	Antwerp
14	,,	,,	240	,,
	Newcastle—			
12	Tyne-Tees S.S. Co.	,,	120	Hamburg
	Plymouth—			
11	Bristol S. Navigation Co.	,,	350	Antwerp
	Swansea—			
12	Burgess and Co.	L.Paste	90	Hamburg
	Aberdeen—			
14	J. Cookson	Lub.	960	Riga
15	R. Connon, Reid and Co.	L.Paste	90	Hamburg
15	,,	Lamp	4,000	,,
	Dundee—			
13	D. Alexander and Sons	Lub.	600	,,
	Glasgow—			
11	Clyde Shipping Co.	Lub. Gr.	190	Antwerp
	Grangemouth—			
11	J. Currie and Co.	Lub.	2,320	Hamburg
11	,,	L.Paste	20	,,
13	,,	Lub.	400	,,
13	W. Graham-Yooll and Co.	Lamp	2,000	,,
	Leith—			
13	G. Gibson and Co.	Lub	2,280	Antwerp
13	J. Currie and Co.	,,	860	Hamburg
14	,,	,,	280	Bremen
15	,,	,,	150	Hamburg
17	W. Graham-Yooll and Co.	Lamp	2,400	,,
	Belfast—			
11	J. C. Pinkerton and Co.	Lub.	70	,,
13	G. Heyn and Sons	Lamp	250	Riga
	Deduct to Correct—			
	Barrow—		11,588,750	
19/4	Anglo-American Oil Co. (Weehawken)	Benzine	31,320	Kustendje
	Total for Week		11,557,430	
	Total for the Fortnight		19,208,840	

The Petroleum Review.

By PAUL DVORKOVITZ.

Vol. XX. *(New Series.)* June 5th, 1909. No. 452

THE PETROLEUM REVIEW:

The ANNUAL SUBSCRIPTION for both English and Foreign readers is 26s., including Postage. Single Copies may be had at the offices at 1s.

The Editor would esteem it a favour if readers, when communicating with the various firms advertising in our pages, would mention the "Review."

Contributions upon items of interest are always welcomed from subscribers, but in each case these should be accompanied with the name and address of the sender, not necessarily for publication.

Editorial Notes.

Dr. David T. Day Honours the "Review."

Upon an another page of this issue readers will find a brief, yet exceedingly interesting article upon the oil fields of Mexico, written by Dr. David T. Day, of the United States Geological Survey, Washington. The fact that the article has been specially written for the Review by so eminent a geologist possibly calls for some little explanation. Dr. Day, it will be remembered, has been staying in London for a fortnight as a delegate from the United States Government to the sittings of the International Commission upon the standardization of the methods for testing petroleum, and also to the Conference of Applied Chemistry, and it was while he was at the offices of the Review this week, chatting over the general oil situation in America, that we were honoured by his agreeing to write a brief article upon the Mexican oil fields. We have no doubt the article will be perused with great interest, for it is the first definite statement which has yet been made by a United States Government geologist upon those exceedingly prolific petroliferous deposits in Mexico. The photographs which are reproduced in the article were also taken by Dr. Day during his recent inspection.

The Golden Harvest in Scotland.

Year after year the Scottish Shale Oil Companies continue their successful careers, and the dividends recently announced in connection with several of the concerns must be highly gratifying to all concerned. For instance, the Pumpherston Oil Co. has paid out £55,250 in a 50 per cent. dividend upon its ordinary shares out of its profits for the past twelve months, while the Broxburn Oil Co. has dispersed no less a sum than £34,956 in a 17½ per cent. dividend upon its ordinary shares. Little less successful have been the Tarbrax Oil Co. and the Oakbank Oil Co., who have likewise held their annual meetings during the past few days, and each declared dividends on the ordinary shares of 15 per cent., thus absorbing sums of £9,750 and £25,500 respectively. These four companies have just paid away on their preference and ordinary shares, dividends amounting to £142,559 as a result of their operations for 1908. It says much for the enterprise and care displayed by those responsible for the conduct of the Scottish shale oil industry, when such splendid dividends can be declared for a period that has been far below the accepted profit-making standard.

The Export Petroleum Trade of Roumania.

Concurrently with the development of the Roumanian petroleum industry, the petroleum export trade shews a most healthy tone. Writing recently from Constantza, Roumania's chief export port, the British Consul records the fact that out of a total of 460,000 tons of petroleum products shipped abroad from Roumania last year, no less than 363,000 tons passed through the port of Constantza. The Constantza exports were made up of 92,000 tons of benzine, 230,000 tons of illuminating oils and 40,000 tons of lubricating and heavy oils; and of these amounts France took 124,000 tons, the United Kingdom came next, taking 105,000 tons, while 51,000 tons of petroleum products went to India, 43,000 tons to Egypt, and 20,000 tons to Italy. During the year the State revenue derived from these exports was about £109,000, and included the transport by rail, the loading and unloading, the storing and the rental of the reservoirs belonging to the Government at the port. The Consul points out that the Government is still energetic in improving the harbour, so that the loading of vessels may be facilitated. The special petroleum basin is now almost complete and has been partially in use for some time.

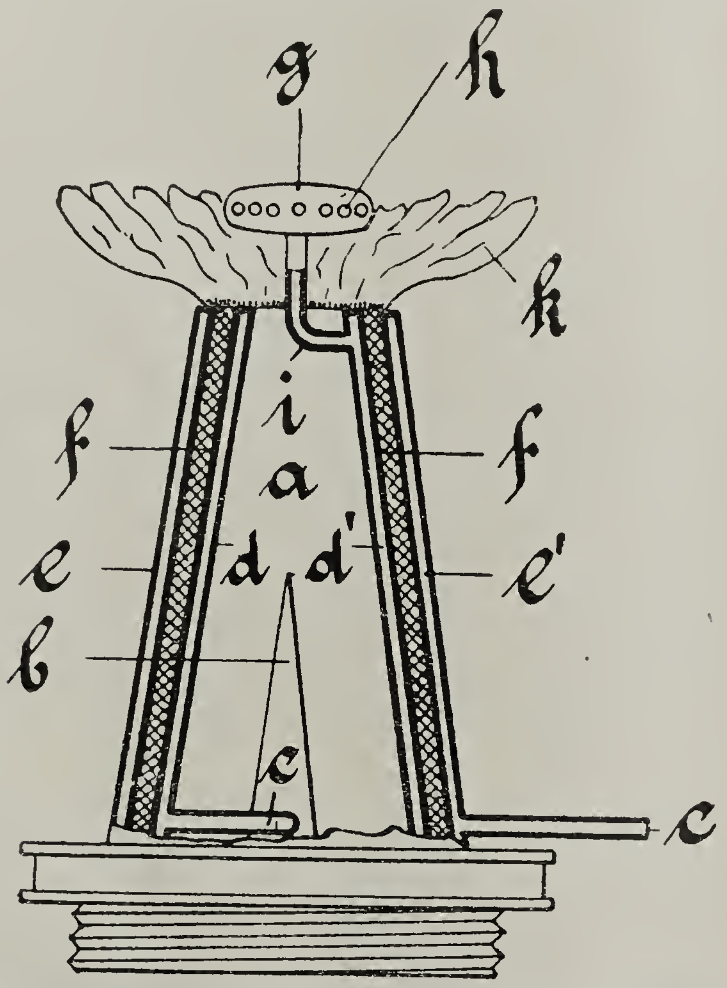
The Petrol Tax.

By a majority of 190, the motion to levy a tax upon petrol utilised for motor-spirit purposes has been agreed to in the House of Commons, and upon another page we give that portion of the Finance Bill which embodies the proposals for petrol taxation. It is a regrettable fact that the Chancellor of the Exchequer has arranged to receive various deputations to put forward the case against the tax by the motorist. We have not a single instance of any attempt that has been made by the companies importing motor-spirit to ventilate their position before Mr. Lloyd George. We are aware, of course, that the tax in the long run will come from the pockets of the consumer of motor-spirit, but it must be remembered that the task of the importing and distributing companies is now rendered all the more difficult by reason that they will have to be responsible to the Government for the payment of the tax in bulk. We believe that our readers will go with us when we say that as set forth in the Finance Bill, the proposition is both unreasonable and most iniquitous, and will do much to stay progress both in regard to motor construction and petrol consumption.

IMPROVEMENTS RELATING TO BURNERS FOR PETROLEUM LAMPS.

An English patent has been granted to Mr. Carl Schmölcke, of Berlin, for an invention relating to an improvement in burners for petroleum lamps. The improvement consists in the petroleum burner having means for supplying oxygen thereto and characterised by oxygen being admitted through an interior chamber, or through interior and exterior chambers or through an exterior chamber, said chambers being formed by the wick-tube on the one hand and a casing arranged parallel or similarly thereto on the other hand, so that the oxygen cools the wick-tube.

As will be seen from the sketch herewith given, the wick-tube *a* with its opening *b* for admitting air is provided with either an inner jacket *d* or an outer jacket *e* or with both, which jackets together with the inner or outer side of the wick-tube form chambers d^1 and e^1 for supplying oxygen; these chambers are each connected through a tube *c* with the supply of oxygen. A tube *i* passes from the inner chamber into a hollow distributor or head *g* provided with outlets *h* for the oxygen. The oxygen passes from the outer-supply chamber through fine holes round the top of the wick. In this manner the flame *k* obtains a sufficient supply of oxygen, whereas this being supplied cold, cools the wick *f* and its tube, and itself is kept cool by cold air being continually supplied inside and outside the burner by the draught of the lamp.



A circular petroleum burner is known in which in the wick-tube there is arranged a correspondingly shaped annular chamber, having outlets at the top end for the purpose of supplying oxygen to the flame, and likewise flat-wick burners are known having chambers for supplying oxygen arranged parallel with and at both sides of the wick-tube. In these devices, however, the oxygen does not directly contact with the metal enclosing the wick.

LONDON OIL SHARE MARKET.

Friday, June 4th, 1909.

Business in the oil share group has been dull since our last issue, what animation there has been, having been noticeable in transactions with the Scottish oil shares which appear to be considerably in favour at the present time, no doubt owing to the satisfactory reports presented. Some excitement has been caused over the Baku shares, but the tendency seems to be to hold in spite of the assessment.

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THE TIN PLATE MARKET.

Messrs. Norton, Owen & Co., of 4, Bishopsgate Street Within, London, E.C., report under date June 3rd, 1909, as follows:—

Prices are fully maintained and a considerable amount of business has been transacted for delivery over the second half of the year. An uneasy feeling still prevails as to possible labour difficulties next month, an unfortunate hitch having occurred in the negotiations of the Tin Plate Conciliation Board for fixing the wages agreement for the ensuing year, and the miners' wages question is also causing much anxiety. We make prices of oil sizes to-day as follows:—

IC 18¾ × 14	124 sheets	110 lbs.	12/1½ to 12/3	per box.
IC 19¼ × 14	120 ,,	110 ,,	12/1½ ,, 12/3	,,
IC 20 × 10	225 ,,	156 ,,	17/1½ ,, 17/3	,,

F.o.b. Wales. Tin lining and iron hooping extra.

◆

The Port of Constantza occupies an area of 192 hectares, of which 118 hectares are taken up by the landing stages, 60 hectares by the reservoirs and 14 hectares by the entrance to the port. In the petroleum basin the water has a depth of 30 feet. The protection dams have a total length of 9,000 feet, and the embankments that of 20,000 feet.

The Steaua Romana's Refinery.—Some time ago the Steaua Romana started their continuous distillation on a large scale in their refinery at Campina, namely, from a system of 24 stills, and are now erecting a plant for refining lubricating oils, which will be on an unprecedentedly large scale. The Vega's lubricating oil plant has been working for the past six months, and has given extraordinarily good results. The products obtained with this plant are lubricating oil of high viscosity, totally free of paraffin, and not solidifying at very low temperatures, even at 40 degrees below freezing point. Their specific gravity is slightly higher than that of Russian oils, but this has no influence on the high quality of the oils.

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ENGLISH PATENTS.

(Specially contributed by Messrs. EDWARD EVANS & Co., Consulting Engineers, Chartered Patent Agents, and Enrolled Patent Attorneys, of the United States, of 27, Chancery Lane, London, W.C.

Application Published in Great Britain.

Starting Devices for Petroleum, Spirit, and Benzine Incandescent Lamps.—Carl Hannemann. No. 24365 of 1908

This relates to an automatic lighting or igniting device for petroleum, benzine, spirit and the like incandescent lamps, comprising a vessel having overflow pipes arranged above or below or outside or inside the receptacle containing the combustible fluid, and the arrangement of a two-way cock above the vessel, which cock communicates with the interior of the vessel, thus permitting the combustible fluid to flow automatically by means of pipes into this vessel, when the operating chain is pulled down, and to flow after a period of three or four minutes into the interior of the pipe of the vaporiser, and to be mixed automatically with the heated air and ignited.

The Standardization of the Methods for Testing Petroleum

MEETINGS OF THE COMMISSION IN LONDON.

(SPECIAL AND EXCLUSIVE REPORT.)

The members of the International Commission to secure the standardization of the methods for testing petroleum and its products, met in London, on May 24th and 25th, the arrangements for the gathering having been set out in detail in the last issue of the REVIEW.

The meetings took place in the Hotel Cecil, and in the absence of Dr. Holde, of Berlin, the Honorary President of the Commission, the chair was taken by Prof. Zaloziecki (Lemberg), the other members of the Commission present being Dr. L. Ubbelohde, the General Secretary, Prof. Mourelo (Madrid), Dr. David T. Day (Chief of petroleum investigations in the United States Geological Survey, Washington), Prof. Bossart (Zurich), Dr. B. Halvorsen (Christiana), Prof. Pfeiffer (Bucarest), Dr. M. Bohm (Ostrau), Dr. Pateno, Prof. Colson (Paris), Prof. Marco Lecco (Belgrade), Dr. L. Edeleanu (Bucarest), Dr. Aisinmann (Bucarest), Prof. Hoogewerff (The Hague), Dr. P. Dvorkovitz (London), Dr. L. Singer (Pardubitz), Prof. Villavecchia (Rome), Prof. Spica, Prof. Eugene Tassily (Paris), Dr. W. L. Sluytermann van Loo (Rotterdam), Dr. Ludwig Weinstein (Berlin), and Mr. A. A. Guiselin (Paris).

It was arranged that Dr. Ludwig Weinstein and Dr. Aisinmann should officiate as secretaries during the sittings of the Commission in London.

The first business before the Commission was the adoption of a method of procedure in regard to the various matters to be under consideration, and, after discussion, rules were laid down governing this matter.

A discussion then arose as to the intention of the last International Petroleum Congress at Bucarest, when it appointed the Commission. The question at issue was as to the number of delegates the Congress intended to be appointed from each country. It was eventually decided by the Commission that the intention of the Congress was that there should be three delegates from each country, but with one vote for each country.

A matter of great importance which was then considered by the Commission was to accurately define the scope of the work of the Commission. On the motion of Dr. Day, it was resolved that the consideration of commercial nomenclature, including the regulation of the methods of transportation, etc., should be eliminated from the work of the Commission, and it was further resolved that the Commission should limit itself entirely to the study of the scientific methods of carrying out the various tests necessary in order to establish the identity and the comparative value of all petroleum products. It was also agreed, after discussion, that where it was not possible to come to a unanimous agreement in regard to the adoption of any particular instrument for specific purposes—such as the instrument for the determination of viscosity—that the work of the Commission in this regard should consist of a comparison of the different instruments in use for that particular purpose and the preparation of tables of equivalents by which all the various instruments could be mutually standardized. It will thus be seen that the intention of the Commission is to make comparisons between the instruments such as those measuring viscosity, and then compare the results with the absolute viscosity measured.

The Commission then resolved to prepare statements of the various tests which should become the future work of the Commission, and these lists will be duly published.

It was decided that the representatives of any country who wished to take up the practical work of comparing the various scientific instruments used in making petroleum tests would only be required to inform the General Secretary of the Commission—Dr. Ubbelohde—as to which methods they would investigate, and then through Dr. Ubbelohde they would be placed in touch with the gentlemen who were making similar investigations in other countries. By this means duplication of any work would be avoided, and at the same time it would be possible to see that justice was done to the different makes of instruments used in the several branches of petroleum research in the different countries.

It was decided that the next meeting of the Congress should take place in America next spring, but upon this matter an announcement will be made at an early date.

A resolution was adopted making Prof. Karl Engler an Hon. President of the Commission, and a congratulatory telegram was forwarded to him, as well as one to Mr. A. Saligny, the President of the Third International Petroleum Congress held at Bucarest, in the autumn of 1907.

Upon the motion of Dr. Day, a resolution was adopted, giving preference in the work of the Commission to the preparation of the tables of equivalents for the various forms of apparatus used for the testing of petroleum.

At the conclusion of the meetings of the Commission on Tuesday, the 25th May, several hearty votes of thanks were passed. The first was to Dr. P. Dvorkovitz for his continuous efforts in looking after the comfort and enjoyment of the delegates during their stay in London. It was pointed out that Dr. Dvorkovitz had, by his energy and courteous hospitality, greatly assisted toward the success of the sittings in London.

A vote of thanks to Dr. Ubbelohde for his great assistance as General Secretary of the Commission, and also to Prof. Zaloziecki as Chairman of the Commission during its London sittings, closed the proceedings.

RECEPTION AT THE CRITERION RESTAURANT.

On the evening of Monday, May 24th, the delegates attending the sittings of the Conference, together with their lady friends, attended a reception at the Criterion Restaurant, arranged by Dr. P. Dvorkovitz, on behalf of the petroleum trade of this country.

The arrangements had been most carefully made for this function, and everything passed off very pleasantly. The reception was very largely attended. Among the foreign delegates present were Dr. David T. Day (Washington, U.S.A.), Dr. L. Ubbelohde (Karlsruhe), Dr. S. Aisinmann (Bucarest), Prof. Villavecchia (Rome), Prof. Colson (Paris) Prof. Max Bohm (Austria), Prof. Eugene Tassily (Paris), Dr. L. Singer (Pardubitz), Prof. G. Pfeiffer (Bucarest), Dr. L. Weinstein (Berlin), Prof. Jose Rodrigues Mourelo (Madrid), . Prof. Zaloziecki (Lemberg), Prof. Birger Halvorsen (Christiana), and Dr. Paul Schwarz (Berlin).

The invited guests present also included the Roumanian Consul in London (Mr. Alfred Stead), Mr. A. O. Goukassow, Mr. A. C. Adams (London and Thames Oil Wharves, Ltd.), Mr. Henry Funck (Messrs. Henry Funck and Co.), Mr. G. H. Watson (Homelight Oil Co., Ltd.), Mr. H. M. Gibson (Manchester Ship Canal Co.), Mr. J. J. Kermode (Liverpool), Mr. Edward A. Cohan (Messrs. H. E. Moss and Co., Ltd.). Mr. A. Leon (Société Petroles de Grosnyi), Mr. George Tweedy, Dr. Edeleanu (Bucarest), Mr. C. J. Rhodes (Messrs. J. Rhodes and Son, Wakefield), Mr. S. Bowley (Messrs. Bowley and Son, Battersea), Mr. George Spies (British Petroleum Co., Ltd.), T. C. J. Burgess (London and Thames Haven Oil Wharves, Ltd.), Mr. D. C. Pugh (Liverpool Storage Co., Ltd.), Mr. William Smellie (Messrs. Meade-King, Robinson and Co.), Mr. R. H. Silley (Lisbon), Mr. C. M. Jacobs (Messrs. Jacobs and Barringer), Mr. E. T. Agius (Messrs. E. T. Agius, Ltd.), Mr. H. Barringer (Messrs. Jacobs and Barringer), Mr. F. E. Fox (Produce Brokers Co., Ltd.), Mr. Leon Gaster, Mr. Predinger (Ploesti, Roumania), Prof. D. A. Louis, Mr. H. Vanderwell (Messrs. Moy, Hardman and Vanderwell), Mr. W. Y. Lewis (Imperial International Exhibition), and others.

During a break in the musical programme, Dr. Dvorkovitz, in the name of the gentlemen associated with the oil trade of this country, gave the delegates of the Standardization Commission a hearty welcome to London. Theirs was an important mission, for they brought together international ideas—ideas of peace and of communal interests. That international commission had its chief aim in standardization—it desired standardization in the methods of testing petroleum as well as in the principles governing its transport by sea and land, while it also desired standardization in the naming of all petroleum products. The greater portion of the labours of that Commission was of a scientific nature, requiring very careful study, and now that the delegates had made London their first meeting place, he wished them all success, and offered, in the name of the petroleum trade of this country, a hearty welcome.

Dr. David T. Day, in replying on behalf of the members of the Commission, said it gave them great pleasure to visit London for their first meetings, and personally it gave him added pleasure that evening to be in the company of so many representative members of the English petroleum trade. The gathering that evening was something more than a mere re-union of friends who had met at the successive congresses at Paris, Liége, and Bucarest: it was an assembly of thoroughly representative oil men from the various countries, and it augured well for the future, that men of different nations came together to discuss matters which would affect their common interests. He was very pleased to recognise the great good which the international petroleum congresses had done, yet he recollected that when Dr. Dvorkovitz first mentioned the matter to him of their establishment, how he firmly told him that such congresses could not be a success. In the light of later events, he had very much altered his opinion, for owing solely to the efforts of Dr. Dvorkovitz, there had been brought together the finest gathering of oil men which had ever been associated with the petroleum industry.

That Standardization Commission appointed at the last Congress at Bucarest had a very important mission to fulfil, and at the same time a very difficult one. Only those who had laboured between the scientific and the practical work in connection with the petroleum industry—only those who had seen the difficulties which beset the industry—could thoroughly appreciate the troubles which were ahead of that Standardization Commission, but he was pleased to say that they had a body of men on that Commission who were the best on the earth to see the thing through, and he sincerely believed they would. They had determined to make their mission a success, and he believed they would. He had come direct from the United States to attend the sittings of the Commission, and he could assure those present that he came with the very best of wishes for success from the petroleum men across the Atlantic. In the name of the Commission, he desired to express his thanks for the very cordial reception which the members had received at the hands of their host and hostess of that evening, and the petroleum trade of England at large.

AN ENJOYABLE TRIP DOWN THE RIVER.

In spite of the somewhat unpropitious state of the weather, the trip down the Thames, arranged for Tuesday afternoon, was voted by all to have been very enjoyable, and at the same time educational.

After having concluded their sittings at noon on Tuesday, the delegates partook of luncheon at the Hotel Cecil, provided by Dr. Dvorkovitz on behalf of the petroleum trade of this country, and afterwards proceeded to Fenchurch Street station, from whence they took train to Blackwall.

Thanks to the hospitality of the Union Lighterage Co., Ltd., a most comfortable craft was placed at the disposal of the delegates. The river trip had been arranged so that the foreign delegates might gain some impression not only of the gigantic proportions of the commerce continuously moving up and down the river, but principally of the great trade in petroleum products which is centred upon the banks of the river Thames. The large storage tanks of our large importing companies were viewed from the river, and the many spots of interest were pointed out to the delegates by Mr. Edmeades, the Secretary of the Union Lighterage Co., Ltd., who kindly accompanied the delegates on the boat, both on their outward and return journeys.

An unlooked for treat to the excursionists was provided by their being able to inspect the Anglo-American Company's oil tanker the "Trinculo," which had just finished discharging a large cargo of solar oil which she had brought from the States. The delegates' boat was drawn alongside the new oil tanker—for this was only her third voyage—and a hurried inspection made of the vessel, the members of the party speaking in the highest terms of praise in regard to everything they saw.

The journey was then continued down the river until Purfleet was reached, with its large oil storage installations belonging to the British Petroleum Co., Ltd., and the Anglo-American Oil Co., Ltd. These were viewed from the river, and shortly afterwards the return journey was commenced. London was reached just in time to permit the delegates, with their lady friends, to visit the Alhambra, although dinner had been arranged for them at the Criterion Restaurant by Dr. Dvorkovitz.

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THE PETROLEUM INDUSTRY OF MEXICO.

Mr. Consul Wilson, in writing upon the trade and commerce of Tampico, Mexico, during 1908, mentions that the oil refinery of the Waters Pierce Oil Co. (Standard Oil) is the largest industrial plant now operating in the State. This refinery is located on the north bank of the Panuco River, between Tampico and the sea. The plant has now got 10 stills in operations, capable of treating 1,200 barrels of crude oil a day The crude oil comes from the Ebano oil fields, which are located on the line of railway about 60 miles west of Tampico, and also from the United States, whence it is shipped to Tampico in tank steamers. There are about 250 workmen, mostly Mexicans, who are kept constantly employed at this refinery.

The most important feature of the year from a commercial standpoint, continues the Consul, has been the enormous impetus given to the oil industry, through the bringing in of the famous Dos Bocas gusher by Messrs. S. Pearson and Son, Ltd. The original production of this well was estimated at 90,000 barrels per day, and, but for the unfortunate occurrence of the well catching fire almost immediately after it was struck and burning continuously for 48 days, it would have been the largest producer of fuel oil in the world. Since the bringing in of this well all the oil lands in this district have been rapidly acquired by the two large rival companies of Messrs. S. Pearson and Son, Ltd., and the Mexican Petroleum Co., who own and operate the oil fields at Ebano. Both of these companies have large staffs of engineers in the field and are pushing forward the drilling of new wells. The oil produced in this district is a strictly fuel oil of from 12 to 18 degrees gravity, Beaumé.

AMERICAN EXPORTS FOR APRIL.

OFFICIAL STATISTICS.

According to the official publication of the Washington Bureau of Statistics, the exports of petroleum from America from the various ports during April were as under:—

	1909. Quantities. Gallons.	1908. Quantities. Gallons.
Crude—		
Baltimore	—	—
Boston and Charlestown	—	—
New York	2,732,555	4,010,195
Philadelphia	302,000	313,700
Galveston and Sabine	5,572,008	154,826
San Francisco	3,570,330	1,806,00
Totals	12,176,893	6,284,721
Total value for the month, 1908		$332,943
,, ,, ,, 1909		$460,527
Naphthas—		
Baltimore	505	636
Boston and Charlestown	8,050	4,850
New York	6,823,334	2,231,385
Philadelphia	3,572,835	2,785,393
Galveston and Sabine	—	2,850
San Francisco	50	7,462
Totals	10,404,774	5,032,576
Total value for the month, 1908		$500,210
,, ,, ,, 1909		$805,917
Illuminating—		
Baltimore	3,885	413
Boston and Charlestown	4,000	82,753
New York	53,508,654	53,237,650
Philadelphia	21,975,779	30,511,962
Galveston and Sabine	5,424,030	3,807,192
San Francisco	4,444,978	1,245,340
Totals	85,361,326	88,885,310
Total value for the month, 1908		$6,377,420
,, ,, ,, 1909		$5,776,067
Lubricating—		
Baltimore	427,608	514,600
Boston and Charlestown	6,151	11,069
New York	8,860,492	7,974,546
Philadelphia	4,619,446	4,236,735
Galveston and Sabine	9,194	14,310
San Francisco	25,708	28,695
Totals	13,948,599	12,779,955
Total value for the month, 1908		$1,703,806
,, ,, ,, 1909		$1,587,765
Residuum—		
Baltimore	1,700,386	1,082,247
Boston and Charlestown	—	—
New York	—	50,000
Philadelphia	2,958,562	427,491
Galveston and Sabine	10,552,330	156,450
San Francisco	—	—
Totals	15,211,278	1,716,188
Total value for the month, 1908		$71,185
,, ,, ,, 1909		$535,235
Total Mineral Oils—		
Baltimore	2,132,384	1,597,896
Boston and Charlestown	18,201	98,672
New York	71,925,035	67,503,776
Philadelphia	33,428,622	38,275,281
Galveston and Sabine	21,557,242	4,135,628
San Francisco	8,041,286	3,087,497
Totals	137,102,870	114,698,750
Total value for the month, 1908		$8,985,564
,, ,, ,, 1909		$9,165,511

TEMPORARY ADDRESS.

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P.O. Tel. 1272 Richmond.

THE VISCOSITY OF ILLUMINATING OIL.

SPECIALLY TRANSLATED FROM "PETROLEUM."

By DR. L. UBBELHODE.

The essential condition of a kerosene lamp is to give a light of a constant illuminating power, which cannot be obtained without the flame being fed with a sufficient quantity of oil, the latter regularly and constantly ascending in the wick. The wick represents a large number of capillary tubes of irregular shape and size through which the oil ascends in the wick. The movement of the oil through the wick to the burner in which it is consumed is thus of a capillary nature, and is regulated by those forces which regulate all capillary movements of liquids, namely, by the surface tension and by the viscosity of the oil itself.

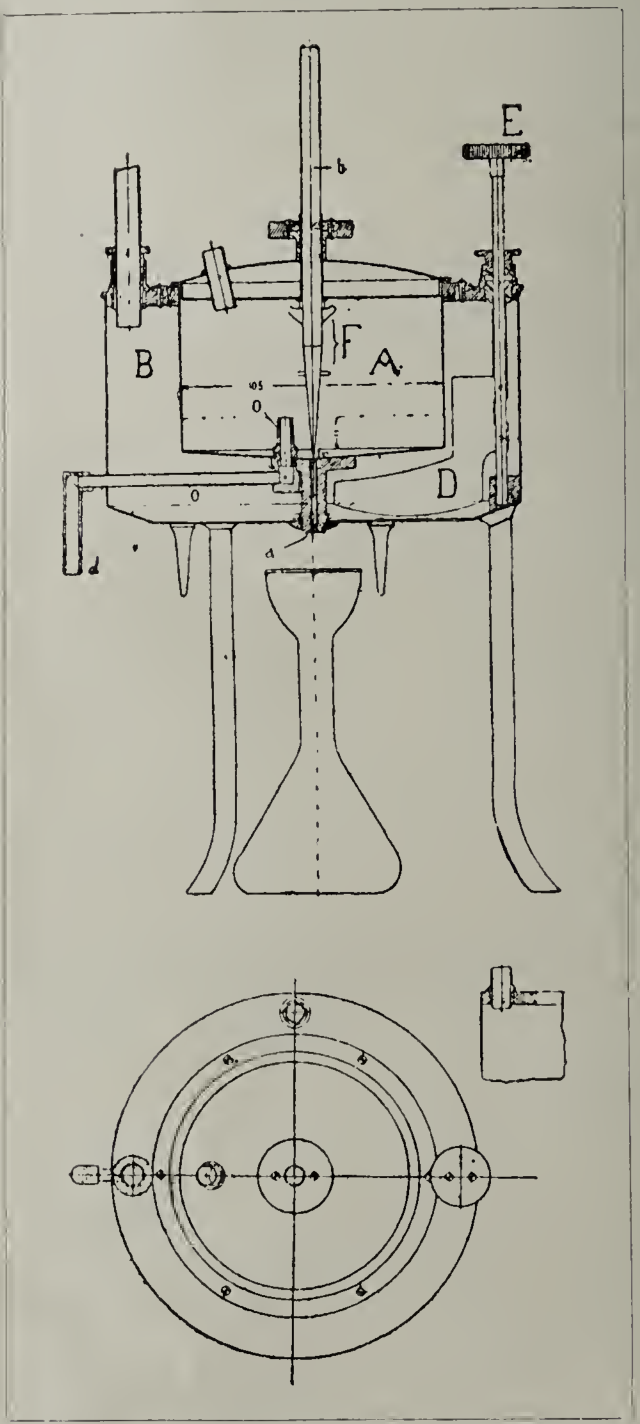
The surface tension of the illuminating oil is the force which is sending it up the wick, while the viscosity is a force-producing resistance to the ascending movement of the oil. This antagonism of the two forces has been established first by Engler and Lisenko independently one of another, and later developed by Stepanoff, who in his work entitled, "The Theory of the Lamp," has established the following formula: $M = \frac{a^2}{z}$, m being the quantity of oil ascended in the wick *a* the surface tension or capillarity and *z* the viscosity. The quantity of kerosene ascending the wick is thus in direct relation to the square of the capillarity and in inverse relation to the viscosity of the oil. As the capillarity of various lamp oils is practically the same, it is evident that the force of ascendency of a lamp oil in the wick depends entirely on the viscosity of the oil, and it must be of the utmost importance to have proper ways of comparing the viscosities of the various oils. The several viscometers do not shew any remarkable differences in the viscosities of lamp oils and a new viscometer specially for determining these latter has been constructed on Engler's principle and has proved very useful in the study of lamp oils. The following table shews the viscosities of some lamp oils determined at 20° C. by means of the new apparatus, the viscosity of water at 20° C. being taken at unit.

	Specific gravity.	Viscosity at 20° C.
Benzine	0·7136	6·692
Kerosene A.	0·8051	1·109
,, B.	0·8053	1·311
German	0.8129	1·324
,, Cl.	0·7960	1.436
Nobel	0·8201	1·517
,, O.	0·8064	1·586
,, E.	0·7963	1·603
,, F.	0.8136	1.801

As can be seen from the above table the specific gravity does not allow to draw any conclusions as to the viscosity of an oil, and that the quantity of a lamp oil ascending to a certain height in the wick is quite independent of its specific gravity. The illustrations here given may now be explained. The reservoir *A* and the lid *C* are made of copper. The reservoir is cylindrical, has a slightly conical bottom, in the centre of which is fixed the outflow tube *a*, which can be closed by means of an ivory pin *b*. The overflow tube *o* is fixed to the outflow tube *a*. The oil flows into a graduated flask *K*, marked at 100 c.c. The following is the table of the measurements of various parts of the apparatus, with the limits allowed for error:—

		Limits allowed for error.
Diameter of the reservoir A	150 m.m.	+ 0·1 m.m.
,, ,, tube *a*	1·25 ,,	+ 0·01 ,,
Length of the lower end of the tube *a*	10 ,,	+ 0·5 ,,
Distance between lower end of tube *a* and higher end of tube *o*	46 ,,	+ 0·1 ,,
Height of the flask K	105 ,,	+ 1·0 ,,
Time of outflow of 100 c c., water at 20°	200 seconds	+ 4·0 secs.

The new viscometer can he used with great advantage for determining the viscosities of cylinder oils and generally for oils used for lubricating motors at very high temperatures, at 200 and 300 degrees celsius. The Engler and other viscometers cannot be used for as high temperatures as these, and besides the oils at 200 degrees being very fluid they will not shew any notable difference in the ordinary viscometers. But the new viscometers, slightly modified, can easily be adapted for determining viscosities at these high temperatures. For this purpose the open water bath is replaced by a covered oil bath B provided with an agitator D, moved by turning the button E. The apparatus can be used up to the temperature of 350° C.



THE MEXICAN OIL FIELDS.

THEIR GEOLOGY AND THE CHARACTER OF THE OILS.

Specially Written for the "Review" by DR. DAVID T. DAY.

So much has been said in regard to the conditions of occurrence of petroleum in Mexico which can hardly be considered conservative, that a brief review of the actual facts may be appreciated. They have resulted from a recent personal inspection of the principal fields.

Geology.—The dominating geological factor of the Mexican oil fields is the broad, flat tertiary plain. Oil pools are found irregularly distributed from the northern border on the Gulf coast to the Frontera district, in the State of Tabasco, on the Isthmus of Tehauntepec, with probability of their extension into Yacatan.

River of Hot Salt Water—Between Two and Three Barrels Per Day—Flowing from the Great Dos Bocas Well.

The pools have been developed by drilling in the neighbourhood of asphalt seepages (which are very common throughout the region) extending from near the Sierra Madre to the Gulf, with a slight dip to the east. This great monocline is cut in many places by basalt dykes and cones. Under the tertiary marls, sands and limestones, are found very porous dolomites, in which the oil is usually stored. The connection of the basalt dykes, with the oil accumulations, is very evident, its *role* apparently having been to arrest the flow of oil along the dip, and the heavy tar-like material seeped upwards along the basalt contact so long as it was sufficiently hot, and eventually sealed itself as it become cold and partly solid.

The Pearson Refinery at Minititlan, Mexico. The Gentlemen in the Foreground are the Manager, Mr Chambers, Dr. Von Harder, Superintendent, Mr. Moore, Geologist, and the Supervising Well Driller.

Characteristics of the Oil.—The oil in the northern portion of the field has been especially developed near a volcanic cone at Ebano, 52 miles west of Tampico. Here the oil has a gravity in the neighbourhood of 13° B., but is so warm as to allow of pumping through pipe lines. The oil here is high in sulphur, but yields good lamp oil. South from this pool the oil becomes progressively lighter, with some exceptions. For example, the oil from the great Dos Bocas Well, near Lake Tamiahua, is lighter than 17° B. This well, which yielded about 5,000,000 barrels of oil, all of which was burned, now flows about 3,000,000 barrels per day of salt water with a temperature of 160° F. The pool is probably absolutely cut off from surrounding pools by barriers of basalt.

An Artesian Well in the Suburbs of Mexico City, from which Quantities of Oil are Always Escaping.

There is little definite information as yet about the Furber field, except that the quality of the oil is better and lighter than that to the north. The same is true of the San Cristobal field, which is well developed, and supplies the refinery at Minitilan, and is efficiently connected by pipe line with the coast. The management of this refinery is in the hands of particularly well trained experts.

This Picture shews the Largest Oil Crater in the United States—the Caddo Field—from which 15,000,000 Cubic Feet of Gas Escape Each Day. The Crater is 300 Feet in Diameter, while that of the Famous Mexican Well is Ten Times as Large.

The Tabasco oil resembles Pennsylvanian oil in colour, density, and freedom from sulphur, and is probably a secondary migration product from mother oils below.

THE DUTY UPON MOTOR-SPIRIT.

The following details, printed *in extenso* from the Finance Bill as published a few days ago to the order of the House of Commons, will be of interest, relating as they do to the recently imposed duty on motor-spirit. The Clauses (64 and 65) of the Bill read as under :—

(1) As from the thirtieth day of April, nineteen hundred and nine there shall be charged, levied, and paid on motor-spirit imported into Great Britain or Ireland a duty of Customs at the rate of threepence per gallon.

(2) As from the first day of June nineteen hundred and nine there shall be charged, levied, and paid on motor-spirit made in Great Britain or Ireland, an Excise duty at the rate of threepence per gallon, and there shall be charged on a licence to be taken out annually by a manufacturer of motor-spirit and by a dealer in motor-spirit an Excise duty of one pound and an Excise duty of five shillings respectively.

(3) Where a licence is taken out under this provision by a manufacturer of motor-spirit, it shall not be necessary for him to obtain any further licence in respect of any still kept or used by him solely for the purpose of the manufacture or refinement of motor-spirit.

(4) The provisions of section ninety-eight of the Customs Consolidation Act, 1876, which relate to the charging of duty at the time of the actual delivery of goods, shall apply to motor-spirit as they apply to the specially excepted goods mentioned in that section.

(5) The Excise duty on motor-spirit may be charged in such manner and at such time during the process of the manufacture of motor-spirit as the Commissioners may determine.

(6) Where motor-spirit or any article in the manufacture or preparation of which any motor-spirit has been used is exported from Great Britain or Ireland as merchandise, or shipped for use as ship's stores, and it is shewn to the satisfaction of the Commissioners that the Excise duty on motor-spirit has been paid in respect of the motor-spirit or in respect of the motor-spirit used, as the case may be, a drawback shall be allowed equal to the amount of duty paid in respect of the motor-spirit, or in the case of an article in the manufacture or preparation of which motor-spirit has been used, equal to the duty on the quantity of motor-spirit which appears, to the Treasury, to have been used.

(7) Sections eight and nine of the Finance Act, 1901, as amended by section two of the Revenue Act, 1903, shall apply with respect to the manufacture of and dealing in motor-spirit as they apply with respect to the manufacture of saccharin, and any provisions of the Spirit Act, 1880, or any Acts amending that Act, may be applied by regulations made in pursuance of this sub-section to motor-spirit.

(8) In this part of this Act, the expression "motor-spirit" means any inflammable hydrocarbon (including any mixture of hydrocarbons and any liquid containing hydrocarbon) which is capable of being used for providing reasonably efficient motive-power for a motor-car, and the expression "manufacturer of motor-spirit" includes a refiner of motor-spirit and a person otherwise preparing motor-spirit.

(9) The Commissioners may by regulations prescribe tests for the purpose of determining whether any inflammable hydrocarbon or mixture of hydrocarbons, or liquid containing hydrocarbon, is motor-spirit within the meaning of this provision.

(1) Any person using motor-spirit for purposes other than supplying motive power for motor-cars shall be entitled to an allowance or repayment of the duty paid in respect of the motor-spirit under this Act, and any person using motor-spirit for any of the purposes mentioned in Part I. of the Fifth Schedule to this Act[*] shall be entitled to an allowance or repayment of half the amount of the duty paid under this Act in respect of the spirit.

(2) Motor-spirit may be delivered without payment of duty or on the payment of half the amount of the full duty payable, in such cases as the Commissioners may approve, and subject to such conditions as to proof, security, and otherwise, as the Commissioners may impose for the purpose of protecting the Revenue.

(3) If any person proves to the satisfaction of the Commissioners that he has within the previous six months used any quantity exceeding five gallons of spirit which is motor-spirit within the meaning of this Act for purposes other than supplying motive-power for motor-cars, he shall be entitled to obtain from the Commissioners a repayment of any duty which has been paid in respect of the spirit, and if any person proves to the satisfaction of the Commissioners that he has within the previous six months used any quantity exceeding five gallons of motor-spirit for the purposes mentioned in Part I. of the Fifth Schedule to this Act, and that the full duty has been paid upon the spirit so used, he shall be entitled to obtain from the Commissioners a repayment of half the amount of duty so paid.

The Fifth Schedule of the Act referring to the rebate on spirit for commercial vehicles reads as under : -

[*] Motor-spirit used for the purpose of supplying motive power—

(1) To a motor car which is constructed or adapted for use, and is used solely, for the conveyance of any goods or burden in the course of trade or husbandry, and whereon the Christian name and surname and place of abode or place of business of the person, or the name or style and principal or only place of business of the company or firm keeping the same, shall be legibly and visibly printed in letters of not less than one inch in length.

(2) To a motor cab, motor omnibus, or other vehicle being a hackney carriage within the meaning of Section four of the Customs and Inland Revenue Act, 1888, while it is standing or plying for hire.

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ANGLO-MEXICAN OILFIELDS, LIMITED.

The Manager reports by cable as follows:—Borehole No. 3: Underreaming. Borehole No. 4: depth 1,457 feet; increase 50 feet; formation, shale soft grey; Oil show increasing. Borehole No. 5: depth 656 feet. increase 26 feet; formation, shale soft grey. Pumping.

. . . LIQUID FUEL . . .

INTERESTING LECTURE BEFORE THE INTERNATIONAL CONGRESS OF APPLIED CHEMISTRY.

Sir Boverton Redwood delivered an interesting address upon "Liquid Fuel," before the members of the Seventh International Congress of Applied Chemistry at the Imperial Institute, on Tuesday afternoon, Sir William Ramsay taking the chair. The lecturer at the outset pointed out that in February last, President Roosevelt announced the calling of an international conference on the conservation of natural resources, and stated that the first immediate result of the conference was expected to be a general inventory of the natural resources of the world, an effort being made to ascertain just where the world stands regarding such resources, what has been done by different nations towards conservation, what is best to be done, and what may be reasonably expected. As an illustration of the importance of such action, continued the speaker, attention may be drawn to a recent report in which Dr. David T. Day, the petroleum statistician of the United States Geological Survey, gives the data upon which he arrives at the somewhat startling conclusion that at the present rate of increase of the output of petroleum the known oil fields of that country will, on the basis of the estimated minimum quantity of oil obtainable, be exhausted by the year 1935, whilst if the present output were maintained the supply would, on the same basis, only last for 90 years.

Within recent years there has been a rapidly growing appreciation of the value of petroleum as liquid fuel, with corresponding increase in the enterprise and energy with which fresh sources of supply have been sought for and rendered available, and the holding of this Congress furnishes an appropriate and timely opportunity for a general international review of the subject, which may enable us more fully to appreciate the relative positions of the various nations in respect of present and prospective supplies of this description of fuel. Such a review may usefully be supplemented by a brief consideration of the important subject of the conditions under which their liquid fuel capital should be expended so as to give the best results.

Until comparatively recently, when the value of liquid fuel became generally recognised, only those deposits which yielded petroleum known to be suitable for conversion by fractional distillation into lamp oil, and the other ordinary commercial products of the refinery, received attention, and territory yielding heavy oil available for use as fuel, or as a source of fuel oil, remained unworked. New petroliferous lands are also continually being discovered, and whereas the United States formerly enjoyed a virtual monopoly of the supply of petroleum products, there has been during the past quarter of a century a petroleum-producing industry of very considerable importance developed in many other countries.

It seemed almost certain that for most purposes on land the internal combustion engine will before long replace the steam engine, at any rate for moderate powers, for whereas the best types of the latter furnish only about 12 per cent. of the energy of the fuel in the form of work, the former can ordinarily be made to yield 25 per cent., and in the case of the Diesel engine the return is as much as 37 per cent. An exception, however, seems to be furnished by the railway locomotive, for so far there is evidence only of a disposition to substitute electric tractors for the present engines, though some locomotives with internal combustion engines have been made, and have given satisfactory results.

In respect of the propulsion of ships it was evidently less easy to forecast the trend of events, for the conditions were in many respects exceptional. Apart, therefore, from the use of liquid fuel in metallurgical operations and other process-work with furnaces, as well as for drying, and generally for purposes other than as a source of motive power, the fuel problems on land and sea, respectively, must to some extent be studied separately.

In naval circles there had been during the past few years considerable discussion of the question, and many authoritative opinions have been expressed.

At the last meeting of the British Association, Mr. Gerald Stoney read a paper on "Recent Advances in Steam Turbines," which elicited from Sir William White the remark that, while convinced that for marine use the reciprocating engine must give way to the turbine, he thought that much work had yet to be done before the latter would yield place to the marine gas engine. Mr. Stoney alluded in his paper to the economy which was expected to result from the use of twin reciprocating engines exhausting at about atmospheric pressure, in conjunction with a turbine driven by the exhaust steam, and Mr. Dugald Clerk, who also took part in the discussion, considered that an entirely new range of possibilities was opened up by the introduction of the exhaust steam turbine, for as stated by Mr. Stoney, there was as much power in the steam from atmospheric pressure down to 27½ inches of vacuum as there was from 150 lbs. down to atmospheric pressure. He thought that not the least important result of this development would be a saving in the national store of coal.

Papers read by Mr. T. J. Milton before the Institution of Civil Engineers in 1907, and by Mr. James McKechnie before the Institution of Naval Architects in the same year, had previously directed attention to the question of substituting internal combustion engines in the propulsion of battleships, but the discussion, in which Sir William White and other eminent authorities took part, indicated very clearly the difficulties which must be overcome before such a change can be effected. Notwithstanding this, several newspapers last February gravely described the new armoured cruiser, "Indefatigable," as a warship without funnels. One of the most interesting contributions to the discussion referred to was the following statement by Admiral the Hon. Sir E. R. Fremantle, as to the value of oil fuel in the naval manœuvres, carried out under Admiral May, in 1906:—"When the stokers were pretty well worn out, and had used all the coal that was nearest at hand, and much labour would be necessary to fetch coal and bring it to the fires, then they were able to use the oil fuel, and I believe I am correct in saying that the four ships which had oil fuel steamed away, even from ships with nominally greater speed."

It is, therefore, surely justifiable to assume that the introduction of the turbine had given the steam engine a new and probably lengthy lease of life, especially for marine purposes, and that there will be for a long time to come a demand for oil fuel for steam-raising. In these circumstances, no apology can be needed for asking you to consider with me the evolution of liquid fuel burning appliances, with a view to forming an opinion as to which are the best systems for adoption. Before doing so, however, I should like to remind you of the advantages which such fuel has been found to present, and the disadvantages attaching to the use of coal.

Foremost, of course, among the advantages is that of thermal efficiency, which in the case of a ship means greatly increased radius of action. Where the demand is a variable one an additional economy is introduced by the celerity with which a liquid fuel fire can be brought up to full power or extinguished. In the case of coal, it is needful to have a thick bed of incandescent fuel, and it takes considerable time to bring this into a condition of active combustion. Moreover, to maintain the efficiency of the coal-fired furnace, clinkers have to be periodically removed, and this operation cannot be performed without allowing cold air to gain free access to the furnace, which is detrimental to the boiler, besides being wasteful of fuel. Added to this, for some time afterwards the fire is not fully effective, so that difficulty would be experienced if a sudden demand were made upon the boiler. Apart from the absence of these disadvantages, which admits of the combustion being continuously regulated in accordance with the requirements, it is obvious that there is, in the case of liquid fuel, great saving of labour in stoking, as well as in the removal of ash and clinker. Liquid fuel can be quickly taken on board a ship, can be stowed where coal cannot be put, and occupies less space than coal. Those who have experienced the loss of time and annoyance from dust entailed in coaling a ship will not need to be reminded of the superiority of oil fuel in these respects, and will readily understand that in the case of vessels of the belligerent marine bunkers can be replenished at sea with liquid fuel from an attendant store-ship through a flexible pipe line with far less difficulty than attaches to the transference of coal.

It is obvious that the precision with which the combustion can be regulated counts for much in the efficiency of liquid fuel, and that the rapidity with which the heat of the fire can be increased or diminished is, in respect of some applications, of great value. A warship, for instance, steaming at half speed, can be put at full speed at comparatively short notice, and a battery of boilers supplying steam for an electric lighting installation can be quickly brought into a condition of full efficiency in the event of fog creating a sudden and unexpected demand. On railway locomotives it is found that the labour of the stoker is so light that this attendant is able to take an intelligent interest in the work of the driver, which, apart from its educational value, is a safeguard.

Remarkable results have been obtained in the use of oil fuel with water tube boilers and turbine engines in the smaller vessels of His Majesty's navy, the destroyer "Tartar," for instance, built by Messrs. John I. Thornycroft and Co., Ltd., having developed on her trials a mean speed of no less than 35·670 knots, and more noteworthy still it is reported that, under war conditions, she has beaten the record, and exceeded 38 knots. Recently built destroyers with 790 tons displacement, have maintained on trial a speed of 34 knots for six hours with a consumption of 11·36 lbs. of oil fuel per hour, whereas not more than a decade ago it required eight tons of coal to keep up a trial speed of 30 knots in vessels of about the size.

The United States has not until recently exhibited much disposition to substitute oil fuel for coal in her navy, although in 1902-3 a lengthy experimental investigation, undertaken by the Naval Liquid Fuel Board of that country demonstrated the advantages of liquid fuel. The results obtained led the Board to the conclusion that the actual evaporative efficiency of a pound of oil as compared with a pound of coal might be considered to be the ratio of 17 to 10, but that taking various circumstances into consideration, the relative efficiency of oil and good steam coal, from the naval standpoint of fuel supply in warships, might be regarded as in the ratio of 18 to 10.

On the other hand, the use of oil fuel on the railways of the United States has enormously increased during recent years. For the year 1907 the officially reported consumption of petroleum as fuel on the railways of the United States amounted to 18,885,691 barrels, as compared with 15,577,677 barrels in 1906. The estimated length of line operated by the use of liquid fuel in 1907 was 13,593 miles, and the total length of line covered by oil burning engines is estimated at 74,197,144 miles, an average of 3·935 miles per barrel of oil consumed.

As far back as 1862, patents were taken out in the United States, by Bidley, by Shaw, and by Linton, for methods of using liquid fuel, and in 1864 experiments were made in this country at Woolwich with an apparatus invented by Richardson. Aydon and Shpakovsky in 1865 independently devised arrangements for injecting the fuel into the furnace in the condition of spray, the former using at first superheated steam, and later ordinary steam for the purpose, while the latter employed compressed air. In the same year Rankine gave his attention to the subject, and in 1877 Sainte-Claire-Deville commenced a series of experiments at the request of Napoleon III. In 1878 Aydon read a paper on the subject before the Institution of Civil Engineers in which he classified in the following manner the various methods of using liquid fuel, which had been introduced prior to that year.

1.—*Injection with Compressed Air.*—In this plan (patented by Adams in 1863) the oil was injected through a double nozzle from a tank by means of compressed air, a layer of incandescent coke being kept on the furnace bars.

2.—*Percolation through a Porous Bed.*—The liquid fuel, accompanied by heated air, percolates upwards through a porous bed placed in the bottom of the furnace space. This system was introduced by Richardson in 1864, and improved in 1866 by the introduction of steam with the air supply.

3.—*Vaporisation.*—The oil is fed into a small retort lying in, and heated by, the furnace, the gas which is thus formed issuing through numerous openings in jets, which are ignited.

4.—*Steam-Spray Injection.*—A jet of steam, which may be superheated, is used to inject the liquid fuel into the furnace, at the same time breaking it up into the finest spray, turning it either wholly or partially into vapour, by the heat of the steam (and partly by the radiated heat of the furnace), and mixing it with the air supply, which is drawn in as an induced current. This is, in principle, the system which has been most largely acted upon by subsequent inventors of various types of burners.

5.—*Vaporisation in a Separate (External) Boiler or Retort.*—Here the retort is not heated in the boiler furnace, and the oil is vaporised by independent heating of the retort, or by the heat of steam brought into contact with the oil, or by a combination of both methods.

It is interesting to note that the system which is now recognised as the best adapted to marine purposes, viz., that of atomising the oil by forcing it through a jet of suitable construction, without the use of steam or air as an atomising agent, is not included in this comprehensive category.

For many years Russia led the way in the use of petroleum as fuel, and the Brothers Nobel, the virtual founders of the Russian petroleum industry, were among the first to demonstrate the value of liquid fuel in metallurgical operations.

A form of burner employed by Mr. Ludwig Nobel for the purpose consisted of a number of shallow troughs arranged in super-imposed series, so that the burning oil flows by successive stages from the highest to the lowest, the flame of the burning fuel being carried into the furnace by induced draught passing between the troughs. With this apparatus fitted to a steam boiler, it was found that 1 lb. of astatki evaporated 14½ lbs. of water, whereas, with the same boiler, 1 lb. of coal evaporated only 7 to 8 lbs. of water Equally good results were obtained with this burner in metallurgical work, a very high temperature being easily commanded.

At this date a large number of other burners were in use in Russia, but although these differed in construction, they were all based on the principle of atomising the oil with a jet of steam. Among these was the burner devised by Mr. Thomas Urquhart, of the Grazi-Tsaritsin Railway, the pioneer in the application of liquid fuel to steam-raising on locomotives.

In England, Mr. James Holden has, within recent years, demonstrated on the Great Eastern Railway the advantages of liquid fuel, and there is no doubt that nothing but the difficulty of obtaining adequate supplies at a moderate price has prevented the general substitution of this fuel for coal as the source of heat on railway locomotives. In his evidence before the Coal Commission, Mr. Holden stated that, weight for weight, liquid fuel had, according to his experience, approximately twice the calorific value of coal. In the Holden burner the injector is so constructed that the oil enters at the top and flows down to an annular passage. The main steam supply passed to the nozzle through the annular space between the central air tube and the passage extending from the oil space to the nozzle. The steam thus drew in the oil, together with the necessary amount of air, and broke up the oil into a spray. The oil is further atomised by an independent steam supply passing through a hollow ring, which is pierced with holes in such a manner that the issuing jets of steam converge towards the nozzle, and strike across the current of partly sprayed oil This auxiliary steam supply also serves the important purpose of breaking up the main jet, so that the flame has more of a flat nature than of a blow-pipe character.

The Rusden-Eeles burner is of a steam atomising type, and although superseded in marine work by burners in which steam is not used, is of considerable historical interest, as being one of the first liquid fuel burners largely employed on ships. The first vessel fitted with this burner was the petroleum tankship "Baku Standard," which crossed the Atlantic burning oil in 1894, and since that date over 1,500 of these burners have been installed in over 90 steamers, most of which are still running with oil fuel.

(To be concluded).

CLASSIFIED IMPORTS INTO UNITED KINGDOM UP TO MAY 31st, 1909.

IN GALLONS.

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Country.	Illuminating.		Lubricating.		Residuals.		Gas Oil. (Solar)		Benzine.		Fuel Oil.		Other Descriptions.		Totals.	
	Since May 17.	From Jan. 1.	Since May 17.	From Jan. 1.	Since May 17.	From Jan. 1.	Since May 17.	From Jan. 1.	Since May 17.	From Jan. 1.	Since May 17.	From Jan. 1.	Since May 17.	From Jan. 1.	Since May 17.	From Jan. 1.
Austria ...	—	—	—	40,930	—	161,450	—	—	—	—	—	—	—	—	—	202,380
Belgium ...	40	110	20,410	287,580	—	—	—	—	—	—	—	—	140	140	20,590	287,830
Canada ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dutch India.	—	400	—	—	—	—	—	—	2,694,100	10,721,270	—	80	—	80	2,694,100	10,721,830
Germany ...	1,318,960	1,992,300	53.360	529,240	—	4,250	—	370,000	—	1,000	—	—	—	9,210	1,372,320	2,906,000
Holland ...	—	300	970	2,870	—	—	—	—	753,730	3,142,970	—	—	1,990	24,230	756,690	3,170,370
Roumania ...	—	4,325,450	—	—	—	24,000	—	2,881,800	—	2,262,220	—	—	—	—	—	9,493,470
Russia ...	822,220	9,010,040	305,020	2,747,610	—	119,750	—	—	—	1,242,340	—	—	—	63 780	1,127,240	13,123,990
U.S.A. ...	1,308,560	48,926,900	1,120,910	17,869,239	—	47,880	5,028,900	33,244,240	—	8,719,420	—	4,189 520	32,700	1,303,610	7,491,070	114,360,339
Other Countries	800	2,600	1,040	16,300	--	—	—	1,000	—	887,380	—	240	—	1,910	1,840	909,430
	3,450,580	64,258,100	1,501,710	21,493.769	—	357,330	5,028,900	36,497,040	3,447,830	26,976,600	—	4,189,840	34,830	1,402,960	13,463,850	155,175,639

NOTES FROM SEVERAL QUARTERS.

AMERICA.

Success of Oil Fuel.—Experiments have been proceeding for some time at Mare Island navy yard with liquid fuel, and these have convinced the naval authorities of the great value of oil as fuel.

More Test Wells in Louisiana.—Reports from Leesville, La., state that very promising oil indications have been discovered half-a-mile west of that city, and several oil men are about to sink test wells.

Pipe Line Stocks.—The total stocks of oil in charge of the pipe line companies in the Pennsylvanian and West Virginian fields at the end of April, amounted to over 15,000,000 barrels, are a higher figure than any reached since January, 1906.

Death of a Prominent Standard Oil Company Official.—Mr. Jesse A. Gheen, the Indiana manager of the Standard Oil Co., who entered the service of the company over twenty years ago as a tank waggon driver, has died at his home in Indianapolis.

The Gulf Pipe Line Company.—The Gulf Pipe Line Co. is now actively engaged upon the erection of six iron tanks, each of a capacity of 55,000 barrels. The new tanks are situated in the Glenn Pool, and as soon as these are completed, ten additional ones will be built.

Californian Production.—The production of the Californian fields during the first two months of the present year is placed at 4,500,000 barrels for January, and 4,000,000 barrels for February. It is expected that there will be a great increase in the production during the summer months, consequent upon the increased activity.

Brighter Prospects.—Brighter prospects appear to be in store for the oil producers in the Mid Continent fields. A representative of the Interior Department recently visited the field and informed the producers that it is the desire of the new administration to give the greatest consideration to the oil producers, and will do everything possible to assist them.

ROUMANIA.

The European Petroleum Co. has instructed the well-known firm of Watson and Youell, of Bucarest, to represent them in Roumania. The company intend doing extensive business in the country.

Messrs. Moldoveano Bros. have recently transferred all their property to the Steaua Romana. The largest plot bears the name of "Din Deal." The price of the concession is stated to have been 192,500 francs.

At Burloi a well belonging to the Steaua Romana, producing 20 tons per day has been damaged by water breaking through the casing. The wells bored by the same company in Mislisoara district have proved very productive.

At Calinet Caranicea a well belonging to the Concordia has been destroyed by fire. The well was producing about 30 tons per day. In the same district the Romano-Americana is boring several wells, of which some promise to be of a very great productivity.

Property Transfer.—The plot which the Olandezo-Romana Co. possesses at Tintea has been bought by Messrs. Koster, at a price of 800,000 francs, plus 5 per cent. of the profits. The director of the above company in charge of the Roumanian business is now concluding the last formalities of the deal in Holland.

Prices and Production.—The price of petroleum products is maintained, although the production is increasing. From the figures obtainable thus far, it appears that the production for April has been about 107,000 tons. Some new very productive wells have recently been drilled, and a further increase in the production may therefore be expected.

The Buzeu District.—Of the eleven new wells bored by the Steaua Romana in the Buzeu district, five are now in working order, and produce 60 tons per month. Well No. 15 has now attained a depth of 570 metres, but the company intend to go to a depth of 800 metres, though not one of the wells in this locality is deeper than 350 metres.

Fire at Campina.—On the 1st of May a fire broke out at Campina in a reservoir of crude oil belonging to the Regatul Roman Co. The oil in the reservoir exploded, and the burning oil spread over the surrounding properties. The ravages of the fire were stopped in time, so that the damage was limited to the destroying of the reservoir and its contents, of about 150,000 francs value.

GALICIA.

Lightning Plays Havoc.—At Tustanowice, on the evening of May 4th, lightning struck a productive well and a fire soon spread to six other producing wells.

Production Increases.—At the beginning of March the oil production in Galicia took a sudden leap forward owing to some new wells being finished. All this had a very lowering influence on the prices, which are now 1 crown for 100 kilos.

Refinery Operations.—In the refineries in the Boryslaw and Tustanowice districts during February 160,000 tons of crude oil were treated, and the output for the same month was 91,000 tons. Thus the stocks, considerable as they were, increased by 70,000 tons.

A Source of Danger.—It has been noticed that the wells provided with lightning conductors have been destroyed by fire, while those without were spared. This is explained by the fact that the lightning conductors established on the productive wells cannot be entirely isolated from the oil oozing out of the well, which fact causes the lightning conductors to be more of a source of danger than of preservation from fire.

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LATEST QUOTATIONS OF PETROLEUM SHARES.

ENGLISH COMPANIES.

This list is restricted to companies who have paid dividends or who are producers.

Company.	Capital Paid Up.	Value of Shares.	Latest Prices.
Assam Oil	£310,000	£1	17/3-18/3
Baku Russian Petroleum ..	£750,000 Ord	£1	0/6-1/0
,, ,, ..	£650,000 5½% Pref.	£1	0/9-1/3
Bibi-Eybat Petroleum Co. ..	£380,000	£1	5/0-6/0
Californian Oilfields	£400,000	£1	$5\frac{3}{16}$-$5\frac{5}{16}$
Commonwealth Oil Co. ..	£500,000 Pref.	£1	½-⅝
,, ,, ..	£225,000 Def.	£1	½-⅝
Lobitos Oilfields, Ltd. (£1) ..	£360,000	£1	25/0-26/0
Pacific Oilfields, Ltd. (£1) ..	£200,000	£1	24/0-25/0
Russian Pet. & Liquid Fuel ..	£500,000 6½% Pref.	£1	2/9-3/9
,, ,, ...	£600,000 Ord.	£1	2/9-3/9
Schibaieff Petroleum ..	£575,000 6% Pref.	£5	5/0-6/0
,, ,, ...	£575,000 Ord.	£1	0/9-1/3
Shell Transport & Trading ..	£2,300,000	£1	60/0-61/0
,, ,, ,, ..	£1,000,000 Pref.	£10	10⅞-11⅛
Spies Petroleum Company ..	£387,500	10s.	12/1½ /7½

RUSSIAN COMPANIES.

Company.	Nom. Value in Roubles	Quotations on June 1st.	
		Lowest Roubles.	Highest Roubles.
Baku Naphtha Co.	100	314	320
,, ,, ,, (issue of 1908) fully pd.	100	–	318
Balakhany Naphtha Co.	250	—	—
Caspian Society	1,000	3,775	3,800
Mazout Co.	250	—	—
Melikoff, A. C.	250	—	—
Mirzoeff Bros.	250	—	—
Naftalan Co.	250	—	—
Naphtha Co. "Kavkas"	250	—	50
Naphtha Trading Co., A. I. Mantacheff & Co.	250	126	128
Neft Co.	250	—	75
Nobel Bros.	5,000	10,500	10,575
,, ,, ...	250	—	514
Rops and Co. V...	250	315	315
Russian Naphtha Co.	250	—	—
Society Mazout	250	—	400
Ter-Akopoff Co.	250	—	—
Tumaieff & Co., J. G.	250	—	—
Volga-Caspian Naphtha and Trading Co	250	—	—
,, ,, ,, (Second Issue)	250	—	—

SCOTCH COMPANIES

Supplied by Messrs. Maclean and Henderson, Stirling.

Company.	Capital Paid Up.	Value of Share.	Latest Prices.
Broxburn Oil Co., Ltd., Ord. 17/- pd	£235,000	£1	£2 2s. 0d.
Do. 6% Cum. Pref. ..	£100,000	£10	£12 7s. 6d.
Burmah Oil, Ord.	£1,100,000	£1	£5 1s. 0d.
Do. Pref.	£250,000	£1	£1 7s. 3d.
Dalmeny Oil Co., Ord. (7 paid) ..	£37,800	£8 10s	£3 10s. 0d.
Do. 5% Pref ..	£18,900	£7	£4 12s. 0d.
Oakbank Oil Co., Ltd., Ord.	£170,000	£1	£1 16s. 3d.
Do. Pref. (£1 paid)	£36,980	£1	£1 4s. 3d.
Do. Do. (£1 paid)	£63,020	£1	£1 4s. 3d.
Pumpherston Min. Oil Co., Ld., Ord. (17s. paid)	£110,500	17s.	£11.0s. 0d.
Do. 6% Cum. Pref	£100,000	£10	£13 17s. 6d.
Tarbrax Oil Co., Ltd. Ord. (£1 pd.)	£38,350	£1	£2 14s. 3d
Do. 6% Cum. Pref.	£35,000	£1	£1 5s. 0d.
Young's Paraffin Co., Ltd., Ord. ..	£452,808	£4	£3 9s. 0d.
Do. "B" Deb...	£150,000	£100	£164 0s.

DUTCH COMPANIES.

Company.	Latest Quotations (per cent.)
Dordtsche Petroleum Co. (Ord.)	167
,, ,, ,, (Pref.)	186
Int. Roum. Petroleum Co.	29
Royal Dutch Petroleum Co...	420
Mœara Enim Petroleum Co.	184½
Oklahoma Petroleum Co. (Pref. "A")	122
Perlak Petroleum Co.	156
Sumatra Palembang Petroleum Co.	158¼
Zuid Perlak Petroleum Co. (Pref.)..	171
Union Petroleum Co.	105
Bibi-Eybat Petroleum Co.	29
Russian Petroleum and Liquid Fuel Co. (Ord.)	14¼
,, ,, ,, (Pref.)	12¼
,, ,, ,, (6% Debs.) ..	35
Schibaieff Petroleum Co. (Ord.)	6½
,, ,, (Pref.)	7
Shell Transport and Trading Co.	317½

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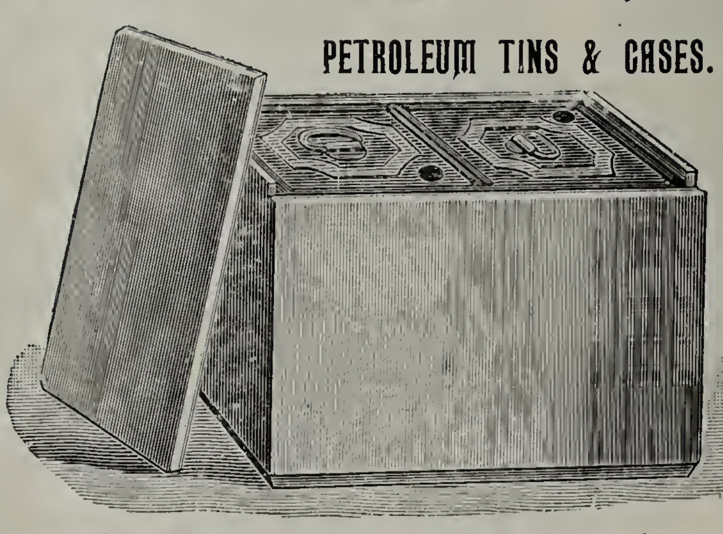

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RECENT PROMISING DEVELOPMENTS IN CALIFORNIA.

THE most recent developments in the Californian fields point most unmistakably to the fact that the future is full of promise, and that in time to come California will still continue to rise in its importance among the petroleum producing countries of the world.

The oil history of California is of comparative recent date, yet full of startling incidents, some of which are without parallel in the career of any other oil producing country. Ten years ago the total oil production of California was but a couple of million barrels, for it was only in 1901 that it suddenly jumped up to 4,000,000 for the twelve months. Since that time until to-day the

Californian fields have witnessed one long run of prosperity, broken but for a short time by reason of the fact that the industry overgrew its bounds, and a position was created when there was no outlet for the continuously increasing crude production. The march of progress is best seen from statistics. In 1902 the total production of the State rose to 14,000,000 barrels, and the following year another 10,000,000 barrels were added. In 1905 the oil production for the first time reached the gigantic figures of over 30,000,000 barrels; the following year it was 35,000,000 barrels. In 1907 it reached 40,000,000 barrels, and, as we have already announced, another substantial increase was recorded last year of at least 5,000,000 barrels.

To-day, then, California ranks but second in importance of any of America's great oil fields, and from present signs it is not improbable that in a few years to come we shall see California occupying the premier position in America in regard to petroleum production. Her present rival—the Mid-Continental Fields—is in a far less advantageous position from the point of view of geographical situation, and this fact alone may, in the future, greatly tend to considerably improve California's position.

One is sometimes inclined to underestimate the importance of the oil fields far distant from our shores, and it is possibly this reason that causes less attention to be paid to the prolific fields of California than would otherwise be the case. Nevertheless, California is one of the most important oil fields in the world, and its 40,000 square miles of presumably petroliferous territory is month by month receiving even greater attention on the part of petroleum operators. The great difficulty which at one time faced operators has entirely disappeared, and Californian oil no longer awaits a market.

With the advent of liquid fuel and its general use in almost every land boiler in California, and upon every vessel trading from Californian ports, together with the ever-increasing demand from the Far East for the crude as well as the refined products, the supply is quite equal to the demand, great though this may be. A few months ago there was some suggestion of an over-production of oil in the State, but in the face of the fact that the producers are well organised and have the situation thoroughly in hand, this is now quite out of the question. It seems strange that while on the one hand there should have been a fear expressed as to over-production, one of California's largest customers has been seriously wondering whether the supply from California will be equal to satisfying all Japan's demands should she generally adopt liquid fuel for her fleet. As a matter of fact, several Japanese Government agents are now in California investigating the position, and upon the report of these gentlemen will Japan decide whether to go whole-hearted into the adoption of oil fuel for its warships. It is an open secret that Japan would have gone over long ago had there not been that ever present contingent as to the question of supply, but in view of the situation as we see it to-day, there can be no doubt as to the favourable nature of the report which the Japanese Government delegates will shortly present. California already possesses a very remunerative trade with the Far East, but given this additional source of outlet, she could extend her present producing limits very materially without ever there being a sign of overproduction with its consequent drop in market values.

As to California's territories and their ability to keep pace with possible extensive developments, we already have every possible assurance that the supply can be maintained indefinitely. The present large drain in various fields is shewing little or no effect in the productivity of the wells, while, on the other hand, operations are everywhere being pushed forward most energetically in territories that have as yet to make their name. The total yield to-day of the State's fields stands higher than it has done at any time previously, and continued throughout the year, there will be an advance over the record of production last year of several million barrels.

That in the opinion of those best qualified to judge the future of California's oil industry is full of promise, may be gathered from the large amount of money which continues to pour into the State in petroleum investments. The Standard Oil Co. is adding most important extensions to its several plants, extending its refinery on San Francisco Bay, and laying down additional pipe lines, while the large independent concerns—the Associated Oil Co., the Union Oil Co., and others little less important—are all recognising in the Californian petroleum industry, a branch of commerce that having come to stay, gives every promise of being very remunerative to all concerned. As shewing the faith which the various companies hold of California's territories, it may be mentioned that quite recently the Associated Oil Co. decided to make a $25,000,000 issue for the purpose of adding to its equipment, especially in the way of extending its pipe lines.

In fact, viewed from whichever standpoint it may, it will be seen that the Californian petroleum industry is full of promise, and still offers unique openings for the employment of large amounts of capital.

THE DOMINION OIL COMPANY, LIMITED.

At the statutory meeting of the Dominion Oil Co., Ltd., held on Tuesday week in London, the Chairman (Mr. Henry Higgins) said that six wells had been sunk on one lease, known as the Tremblay Lease, of the company's property. Arrangements had been made for the sinking of two more wells, and the board were now daily expecting to receive advice that these further borings were producing a satisfactory yield of oil. The vendor company would duly account for the oil sales since February 17th last. The company still had a large area covered by the remaining 19 leases, comprising 1,300 acres, and surrounded practically on all sides by the lands at present producing oils. Some of the adjacent properties have been proved to be most prolific. Five thousand pounds would forthwith be spent on sinking further wells and in the development of property, and there was still £22,000 of unissued capital which might be used as required and devoted to the further development of the property.

Scottish Oil Companies.

PUMPHERSTON OIL COMPANY, LIMITED.

The annual meeting of the Pumpherston Oil Co. was held on Friday week at Glasgow, Mr. John Paterson taking the chair.

The report for the year ended April 30th stated that after providing for the maintenance of the works and mines during the year, and including £16,587 brought forward, there was a balance at the credit of profit and loss account of £131,090, which the directors recommended should be disposed of as follows, namely: —In writing off for depreciation, £10,000; writing off the amount expended on improved plant during the year, £41,758; in payment of a dividend at the rate of 6 per cent. on the preference shares, £6,000; and a dividend at the rate of 50 per cent. on the ordinary shares (both free of income-tax), £55,250; leaving a balance of £18,081 to be carried forward. The capital expenditure for the year amounted to £42,952. The expenditure included the cost of opening up new mines at Pumpherston and Deans, extensions at Deans works, and erection of additional workmen's houses there. The sum of £41,758 had been expended during the year under improved plant account, and the directors recommended that the whole of this sum should be written off. The extensions and improvements at Deans works have just recently been completed, and would, as indicated in last report, add considerably to the productive and profit-earning power of the company. A considerable fall had taken place in the prices of paraffin wax and all oil products, but on the other hand the company would benefit largely during the current year from the extensions and improvements which had been made at Deans works, and from which the past year derived no advantage.

The report was unanimously adopted, and Messrs. Tennant and Alexander were re-elected directors of the company.

OAKBANK OIL COMPANY.

Mr. R. T. Moore presided at the annual meeting of the shareholders of this company, recently held in Glasgow. The Chairman in moving the adoption of the report, already published, said that during the whole year the results were adversely affected by the poor yields of that part of the output of shale which came from Oakbank, and also by the low prices obtained for products. Fortunately the lower prices of fuel and wages and other economies which were effected at the works had brought forth a balance sheet quite as good as that of the previous year. At the last meeting he mentioned that boring operations were in progress at their Oakbank field. These had resulted in the proving of an area of rich shale. Lying as it did at their doors, this was a valuable addition to the resources of the company, and when the mines which were being driven to open it up had been developed it would enable the Oakbank retorts to be restarted. They had met with keen competition from abroad. Prices of products had been lowered, and every effort had been made to fight them (the company) on their own ground. One notable form of which notice had been taken in the newspapers was the selling of burning oil in bulk by the Anglo-American Co. The directors had considered the matter, and had come to the conclusion that it was necessary for the Scottish companies to take the matter up, and with that object in view they had arranged for several tank installations from which burning oil would be distributed. It seemed a pity that the Scottish oil companies should not present a solid front when they were met with foreign competition. Could not some central selling agency, which would deal with the sales of the products of all the Scottish companies, be organised? They all knew of the phenomenal success of such an organisation in the thread and other trades. The oil trade was eminently suited for such a combination. Mr. John McLeod asked if they could make some representation to the Government to tax incoming candles and oil from America. The Chairman, in reply, said that it was a political question, and he did not know that they could make much of it. The report was adopted.

TARBRAX OIL COMPANY, LIMITED.

Mr. William Fraser presided at the annual meeting of the Tarbrax Oil Company, held on Friday week, in Glasgow. The report for the year stated that after providing for the maintenance of the works and mines during the year, and including the sum of £3,019 brought forward there was a balance at the credit of profit and loss account of £21,823, from which fell to be deducted interest on loans (£1,741), leaving £20,082, which the directors recommend should be disposed of as follows:—In writing off for depreciation, £6,000; in payment of a dividend at the rate of 6 per cent. per annum on the preference shares, free of tax, £2,863; and in payment of a dividend at the rate of 15 per cent. on the ordinary shares, free of tax, £9,750, leaving a balance of £1,468 to be carried forward. The shale supplies during the year had been more than ample to meet the requirements of the works, which had been kept fully employed. The directors recently decided to erect an additional bench of retorts, which when completed, would add considerably to the productive power of the works. To meet that expenditure and also to liquidate part of the loans to the company it was resolved to issue 20,000 of the un-issued ordinary shares. Those were offered to the ordinary shareholders in terms of circular dated March 29th last, and had been fully taken up. The erection of the new bench of retorts was being proceeded with, and would, it was expected, be completed about the end of September. There had been a fall in the prices of all crude oil products. That would adversely affect the price which the company would receive for its crude oil during the current year, but as against that, considerable benefits wold be derived from the additional retorts when those were completed and at work.

The report was adopted, and the retiring directors—Messrs. Thompson, McLintock and Thomas Alexander—were unanimously re-elected.

THE REGULATION OF RUSSIA'S STATE PETROLIFEROUS AREAS.

A NEW PROJECT.

The Ministry of Commerce and Industry has brought in the Duma a project of a law relating to the concession of the State petroliferous properties to private persons for exploration. It has been elaborated by a special committee under the presidency of the Assistant Minister of Commerce and Industry, Mr. Konovaloff. The committee has revised all the existing laws on the subject as well as all the technical details relating to the concession of petroliferous properties for exploitation by private persons, and have come to the conclusion that it is imperative that absolutely new legislation dealing with the subject must be introduced into the Duma. In view of the urgency of the question, the details of the regulation of conceding the State petroliferous properties and the preliminary explanations of the cause have as yet not been elaborated by the committee. They have also left the question of the draining of the Bebe-Aibat bay in abeyance.

The main basis of the project as elaborated by the Committee is as follows:—All petroliferous lands belong to the administration of the Ministry of Commerce and Industry, and are divided in plots of from 1 to 100 dessatines. These plots are to be conceded by auction to private persons for a term not exceeding 24 years. For each plot there will be fixed a compulsory minimum production, and by way of auction a conditional price for the crude oil produced, besides which there will be a market price fixed from time to time by special petroleum committees. The tax levied by the State from the producers will depend on (1) the quantity of produced oil fixed as compulsory and normal for each plot separately; (2) the quantity of oil produced on each plot above the normal quantity; (3) the conditional and market prices of the oil. The compulsory normal quantity must be paid for at a rate regulated by the difference between the conditional and market prices. The production above the normal and compulsory quantity must be paid for at the rate of a certain percentage of the market price.

The compulsory quantity of oil to be produced during the whole of the term of the concession of a plot must not be less than 5,000,000 poods and not more than 50,000,000 poods. In the conditions of the auction will be a clause regulating the term of exploration and drilling works. Instead of paying cash for the normal and compulsorily produced quantity payment in kind will be allowed, *i.e.*, contracting for a certain quantity of oil to be delivered to the Treasury on the basis of the conditional price fixed at auction. The auctions will take place in special offices by way of closed offers, without overbidding, and the plot will be conceded to the person offering the lowest conditional price, but only in case this latter does not exceed the secret conditional price fixed by the Ministry. Under certain circumstances, for instance, if it benefits the State's interests, concessions of plots by overbidding with regard to price, drilling works, buildings, etc., will also be allowed. In these cases the price will be fixed either as so much per pood of oil to be produced, or in the shape of a certain part of the market price, or even by contracting to the Treasury of certain quantities of crude oil or mazout, or a percentage on the total profits to be made from the exploitation of the plot. When over-bidding is allowed the plot will be conceded to the person offering, in the opinion of the Ministry of Commerce, the best conditions. All the expense of accounting to the State for the produced oil will be paid by the producer. In case of exploitation of the plots by means of electric power brought on the plot from without, a certain part of the produced oil may be free of tax. The fine for arrears of any payments to the State by producers will be 5 per cent. on the money due and in addition 1 per cent. for each month in arrears.

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Gulf Coast Production.—The production of the Gulf Coasta oil fields during April is placed at a total of 760,000 barrels, which represents a decrease of 10,000 barrels as compared with the production of the previous month.

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Studies in the Application of the Anticlinal Theory of Oil and Gas Accumulation.

BY

. . MALCOLM J. MUNN . .

(Continued from page 296.)

In barren areas the pay streaks are usually found to be saturated with salt water, but are sometimes without either water, oil or gas. In such wells where salt water alone is found, it frequently shews a head of several hundred feet, the height to which the water rises not apparently being affected by the structure. The dry pay streaks are relatively few in number, and are scattered promiscuously throughout the quadrangle without particular reference to structure, though a larger per cent. of barren pay streaks are found to be dry in the northern half of the quadrangle than in the southern half of the quadrangle.

The writer has often been struck by the great diversity of opinion among both geologists and producers as to the exact meaning of the term, "anticlinal theory." Interpretations of this term are almost as numerous as those who use it. In general, however, it is limited to the statement of the relative position of oil, gas, and salt water to each other in the oil-bearing beds and to the structure of that bed. The fact that the majority of oil and gas pools shew this relation to structure is regarded as the essential part of the anticlinal theory, and it is thought that no reason for such relationship is needed to make the theory complete. Therefore, a pool is said to be situated in accordance with the anticlinal theory if it is on or near the axis of an anticline, no consideration being given to the reasons why the pool is so situated. Many attempts have been made to present a satisfactory exposition of the principles upon which the anticlinal theory is based, but up to this time no statement has been found to be of general application.

In order to shew clearly the application of the anticlinal theory to the facts above noted, it is found necessary to present a complete statement of Griswold's interpretation of the principles of this theory as laid down by White, Orton, Winchell, and other earlier geologists, who each studied various parts of the Appalachian region. Though Griswold's deductions are among the latest and most elaborate yet presented by an American geologist, they do not embrace a few salient features brought out by previous writers, to which reference will be made later. He says:—

"The organic matter imbedded in the shale which lies below and between the oil-bearing sandstones mentioned above, may have been the original source of the petroleum. This hypothesis is accepted in this paper, though such acceptance is not meant to imply that the hypothesis is established beyond question, or that there are no facts and arguments which point to other sources of petroleum tha the organic matter found in the accompanying sedimentary formations.

"Whether the petroleum comes from within or from below the shales, it must pass through them, and to do this it must pass through the very small pores existing in those relatively impervious beds. The nature and cause of this movement are not understood. Capillary action and great rock pressure may be suggested as causes which aid in forcing the petroleum out from the shales, but there are not sufficient data on this subject to justify any scientific explanation. It matters little what is the ultimate source of the oil: the important facts are its occurrence now in the porous sandstones, its circulation through the rocks, and the conditions leading to its accumulation in commercial deposits.

"Movement in Porous Rocks.—The porous rocks into which the oil and gas enter may be dry or they may be completely saturated with water. In most cases it is probable that a combination of these two conditions exist—that the porous rocks are completely saturated with water up to a certain level, but above that point they are dry. The movement of the hydrocarbons through the rocks will not be the same in the two cases, and therefore each condition must be considered separately.

"If small quantities of oil and gas enter dry porous rock at different points the oil will flow down as long as gravity is sufficient to overcome the friction and the capillary attraction. The gas will diffuse with the air or water vapour contained in the pores of the rock.

"Oil and gas entering a porous rock that is completely saturated with water will be forced up to the top of the porous stratum by the difference in the specific gravity of the hydrocarbons and the water. Here the oil and gas will remain if the porous stratum be perfectly level, but if it has a dip sufficient to overcome the friction the particles of oil and gas will gradually move up this slope, the gas with its lower specific gravity occupying the higher places.

"In case the porous rocks are partly saturated a combination of these two actions will take place. The oil entering above the line of complete saturation will flow down to that line and the oil entering below will be forced up to the top of the completely saturated portion.

"The statements given above are based on the assumption that the oil-bearing rock is homogeneous throughout and that the oil will move with the same degree of freedom in every direction. This is rarely the case. Sandstones are noted for their irregularity in composition, as regards both the size of the individual grains of sand and also the material which cements the grains together. It is obvious that any fluid will move more rapidly through a coarse conglomerate imperfectly cemented than through a dense, fine-grained sandstone, the particles of which are thoroughly coated and all the interstices filled with impervious cement. If the oil-bearing rock contains areas practically impervious, these areas, according to their size and position, will be more or less perfect barriers against the movement of the oil or the gas.

"Places of Accumulation.—(1) In dry rocks the principal points of accumulation of oil will be at or near the bottom of the synclines or at the lowest point of the porous medium, or at any point where the slope of the rock is not sufficient to overcome the friction, such as structural terraces or benches. (2) In porous rocks completely saturated the accumulation of both oil and gas will be in the anticlines or along the level portions of the structure. Where the area of porous rocks is limited the accumulations will occur at the highest point of the porous medium, and where areas of impervious rocks exist in a generally porous stratum the accumulation will take place below such impervious stop, which is really the top limit of the porous rock. (3) In porous rocks that are only partly filled with water the oil accumulates at the upper limit of the saturated area. This limit of saturation traces a level line around the sides of each structural basin, but the height of this line may vary greatly in adjacent basins and in different sands of the same basin.

"Partial saturation is the condition most generally ound, in which case accumulations of oil may occur anywhere with reference to the geologic structure; it is most likely, however, to occur upon terraces as levels, as these places are favourable to accumulation in both dry and saturated rocks.

"Under all conditions the most probable locations for the accumulations of gas are on the crests of anticlines. Small folds along the side of a syncline may hold a supply of gas, or the rocks may be so dense that gas cannot travel to the anticline, but will remain in volume close to the oil."

What explanation of the facts stated above does this interpretation of the anticlinal theory offer ?

In beginning, it does not seem possible to seriously question the assumption that these pools are accumulations. The fact that they fill, at a high pressure, soft streaks of a pure quartz sandstone and conglomerate in which no indications of organic material occur, and that the pools have a definite structural grouping, which it is not probable that they would have if indigenous to the pay streaks, seem to be sufficient proof that the pools are accumulations. If the oil is not indigenous it must have reached the porous lenses by travelling a greater or less distance through the finer grained, less porous sandstone which encloses them. According to Griswold's interpretation of the anticlinal theory we may assume that all the oil is indigenous to the Hundred-foot sand and that no part of it has come from the shales above and below. This assumption the writer believes to be far from the truth, since almost all the evidence collected by geologists points to the shale as the ultimate source of the oil. Eliminating this possibility, however, and granting that the oil by some mysterious means has come to be in the sandstone, it will be seen that its movement has been downward through the direct action of gravity where the sand was dry, and upward through difference in weight of oil and water where the sand was saturated with water. Not considering the fact that water is now found in the pay streaks, the first way may be at once discarded, because a large per cent. of the oil is confined to the anticlines, in which cases there are no steeper dips or higher drainage areas available as a source for it.

If we assume that this oil has been transported to the pay streaks by difference in gravity of oil and water, to provide a sufficient catchment area, we must also grant that it has travelled laterally through the surrounding sandstone for considerable distances where the sand has a maximum dip of not more than 1 foot in 50 feet, and an average dip of probably about 1 foot in 75 feet. Crude petroleum from this sand has a specific gravity of about 0·7977, pure water being 1·0000. The specific gravity of the salt water with which the oil is associated is 1·0623, the difference in specific gravity of water and oil being 0·2646 or about 30 per cent. of the total weight of the oil This is, therefore, the maximum force that a globule of oil can exert upward under hydrostatic pressure. At the maximum dip of 1 foot to 50 feet the force available for movement along the dip is calculated to be about ·0067 of the weight of the globule of oil. This is the available free force which advocates of the hydrostatic idea of oil accumulation consider sufficient to bring together under enormous pressure large pools of oil and gas. Since this is the crux of the whole question of accumulation by difference in specific gravity of oil and water, it justifies minute examination.

Those favouring this idea doubtless believe that the available force for movement along the dip as given above, has no counter-balancing force opposing it. There are, in reality, several constant forces that act in opposition to this movement. Some of these are: molecular repulsion of oil and water; capillary adhesion; interstitial molecular cohesion (which is proportional to the viscosity of the oil) and both static and kinetic friction. Of these, molecular repulsion prevents diffusion and tends to force the less plentiful oil particles into spherical globules, in which shape the viscosity of the oil exerts its maximum strength against movement through the water-logged pores of the sandstone. It is reasonable to suppose that a large percentage of the globules when formed are of sufficient size to envelop one or more sand grains and to completely fill the interstices between two or more grains, but that the total amount of oil at one place is exceedingly small. Under such conditions the adhesion of oil to the walls of the capillaries and the molecular cohesion of oil particles around the grains would offer relatively enormous resistance to any movement. The co-efficient of static friction "is the ratio of force required to just move a body over a still one, to the pressure with which the bodies are held in contact." This ratio is not dependent upon velocity or upon the extent of the surfaces in contact on which the pressure is distributed. As a simple example of this force: If we lay a penknife upon the horizontal surface of a book and slowly tilt this surface, the knife will remain motionless until a certain point is reached where the static friction is overcome by gravity and the knife begins sliding down the slope. If the tilting is arrested a moment before this point is reached, the knife will remain motionless indefinitely. This is not exactly an analogous example since we deal with two solids instead of a solid and a liquid. Unfortunately the writer has no figures at hand, nor does he know of the existence of any, which give the co-efficient of static friction of oil under the conditons named above.

(To be continued.)

The BAKU RUSSIAN PETROLEUM COMPANY, Ltd.

. . PROPOSED RECONSTRUCTION . .

The adjourned ordinary general meeting of the Baku Russian Petroleum Co., Ltd., was held on Monday week, at River Plate House, London, E.C., Mr. Herbert Allen taking the chair.

In opening the meeting, the Chairman said it was a source of great satisfaction to the board to be in a position at last to bring before the shareholders a definite and practicable scheme of reconstruction, and it was still more gratifying to them to find that that scheme on the whole had met with a very cordial reception at the hands of the shareholders. Theirs was a large company, with between 3,500 and 4,000 shareholders, and the definite expressions of opinion against this scheme—and they were merely on points of detail—were only five altogether. The present scheme possessed the merit of extreme simplicity, and he was glad to say that the joint committee of directors and shareholders were pretty well in agreement upon the main principles, which included an all-round assessment of 5s. a share on both classes of shares, with differential treatment, however, of the two classes. The directors regarded the settlement with the debenture holders as an excellent one. The debenture holders had been in a position to foreclose for some time past, but they had always been extremely conciliatory and friendly. An issue was proposed of £125,000 five and-half per cent. debentures, covering not only the £85,000 of outstanding old debentures, but also £40,000 to £45,000 of what were really Russian creditors. In the rearrangement of the capital they had tried to combine reduction and simplification. Instead of having £1,400,000 of capital divided into two classes, it was proposed to have from £600,000 to £700,000 of one class, with the addition of profit-sharing certificates, the latter being brought forward partly as a compromise between those who wanted a small nominal capital and those who wanted a large one. By paying an assessment of 5s., a preference shareholder would receive 20s. in paper, being 10s. in shares and 10s. in certificates, whereas the ordinary shareholder would receive 15s. in paper, being 10s. in shares and 5s. in certificates. The shares would be entitled to two-thirds of the profits made, and the remaining one-third would be applied to the redemption of the certificates by tender. The reversion to the balance of one-third ot the profits would eventually fall to the ordinary shareholders. It had always been recognised as the greatest difficulty they would have to contend with that in any scheme involving an assessment the preference shareholders would think they ought to have better treatment than the ordinary, This had been met to some extent in the scheme, which might be regarded as a fair and equitable solution. The total fixed charges in respect of the debenture issue would only be about £10,000 a year for interest and redemption, which was not a heavy burden, and would not stand in the way of the shareholders receiving a dividend, because he was able to mention that there were little properties of one sort and another leased off, which brought in rents and royalties during the year quite equal to the amount of the fixed charges. He did not claim that the scheme was an ideal one; they could not have an ideal scheme where an assessment on the shareholders was involved. A scheme, however, was inevitable, and the directors considered the present one the best that could be put forward, having regard to all the circumstances. The board did not claim any novelty for it; it was on very ordinary lines. There was no attempt to evade Acts of Parliament or to tamper with the rights of anybody. The Chairman concluded by moving a resolution approving the scheme and requesting the directors to take the necessary steps to carry it into effect.

Mr. R. W. Barnett, in seconding the resolution, said the only note of criticism in the press with regard to the scheme had been that it did not do quite enough for the preference shareholders. In this connection he would point out that if the preference shareholders had to bear the whole burden themselves it would mean an assessment of something like 11s. 6d. per share. If they wanted the assistance of the ordinary, a scheme must be brought forward which would commend itself to both classes. With the present heavy burden of debt lifted off the shoulders of the undertaking, with sound management in Russia and sound administration in London, there was every reason to hope for a prosperous future for the undertaking.

Mr. Lea Smith could not see why the preference shareholder should be practically put into the same boat as the ordinary shareholder—why they should not still keep the two classes of shares. The difficulty had been overcome in other cases. He did not mind how much his preference shares were cut down, but he did not want to be put into a different class. He did not speak merely on account of the preference shareholders in this company, but on behalf of preference shareholders generally. There was a feeling too much abroad nowadays that when a company came to grief the preference shareholder should bear practically the whole of the burden. It was manifestly unfair that he should be put into a class of speculators, and if the scheme went through he would seriously consider whether he would follow the company or not.

Mr. Watson Rutherford, M.P., said the important question before the shareholders was, if they paid an assessment of 5s. a share, who was going to have control of the money? He was not there to oppose the scheme. If it were underwritten he would support it, but if it were not he should not do so. If it were underwritten it would mean that it was bound to go through and also that there would be a market for the shares, and that was worth giving something for. He regarded the provision as to profit-sharing certificates, however, as a clumsy device, being of opinion that shares should have been issued in their stead. For the company to have renewed prosperity it was essential that the agitation which had raged for so long should stop. Bickerings and disputes of all kinds should be at an end. At this juncture they should combine together and put someone in charge of the undertaking in whom they could all have confidence.

Mr. Gamble thought the present scheme was the sanest of all the schemes which had been propounded, and although he might have felt disposed to agree with the point urged by Mr. Lea Smith, they had to deal with the situation as they found it, which was, he supposed, that the ordinary shareholders practically commanded the position, and would not be disposed to put more money into the concern unless their interests were safeguarded. If they did not come forward and put their money in, what would be the position of the preference shareholders? It might be imagined from the attitude Mr. Lea Smith took up that the preference shareholder was a full-blooded man who could protect himself with the energy of a suffragette, instead of which he was a poor, emaciated being almost on the verge of expiry. If the preference shareholder were going to push his rights to the full, the ordinary shareholder must retire, and the whole thing would fall to the ground.

The Chairman, in reply to the various speakers, said that before the shareholders were asked to say whether they would put up further money they would be fully informed as to the actual position and the prospects of the company and also as to its future management. That was a point which did not arise on the present occasion. Personally, he was asked by people who found nearly £100,000—the last money put into the company, and the money which was producing oil at the present time and which had paid for the wells that were giving the increased output—to join the board and endeavour to extricate the company from its difficulties, and he had done his utmost in that direction. With reference to the question of underwriting, that depended very much upon what happened at the present meeting. It had been seriously discussed, and of course the position of an underwriter was that he did not care to take the risk of underwriting a big issue of shares if there were to be nothing but turmoil and agitation in the company. If they could get peace, the success of the scheme was assured.

Eventually the motion was carried with one dissentient, and at an extra-ordinary general meeting the articles of association were altered with a view to enabling the preference shareholders to approve the scheme upon its being formally presented.

THE PETROLEUM PRODUCTION IN GALICIA IN 1908.

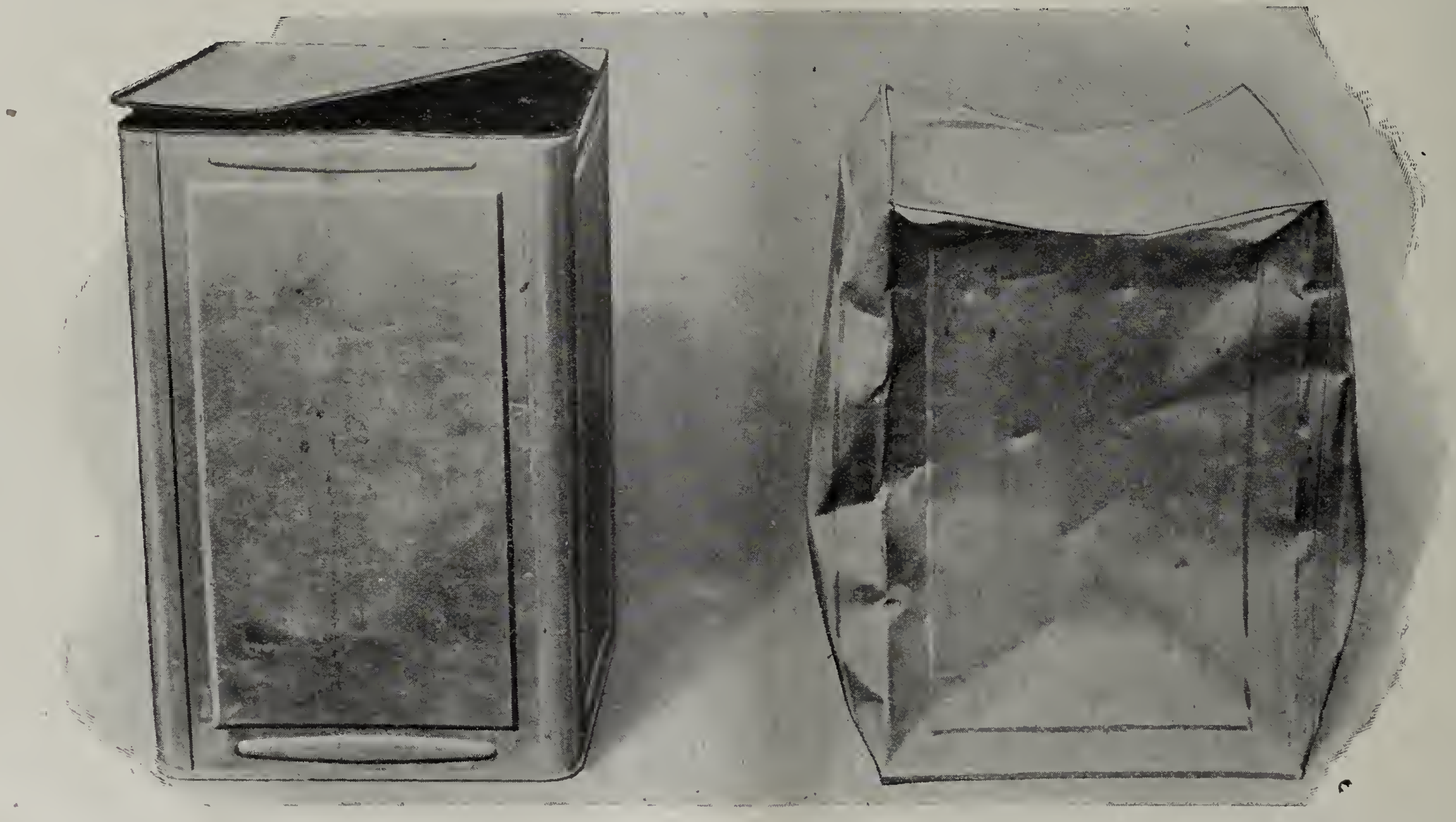
According to the report of the general secretary of the National Petroleum Association of Galicia, the production of crude petroleum in Galicia for 1908 was 1,754,022 tons, against 1,175,974 tons in 1907, thus shewing an increase of about 50 per cent. Of this quantity the Tustanowice district produced 1,318,710 tons and Boryslaw 266,910 tons, and thus the two districts contributed 90 per cent. of the total production.

During 1908, 1,266,560 tons of crude oil were delivered to the refineries, 70,000 tons were used as fuel and 6,250 tons were exported. The stocks at the end of 1908 amounted to 1,048,010 tons, as against 636,898 tons at the end of 1907 and 399,536 tons at the end of 1906.

The following table shews the progress made in Galician petroleum production since 1874:—

Year	Tons.	Year.	Tons.	Year.	Tons.	Year.	Tons.
1874	20,927	1883	51,000	1892	89,871	1901	452,200
1875	22,140	1884	57,000	1893	96,331	1902	576,000
1876	22,927	1885	65,000	1894	132,000	1903	713,330
1877	23,714	1886	42,540	1895	214,800	1904	827,117
1878	24,500	1887	47,817	1896	339,765	1905	801,796
1879	30,000	1888	64,882	1897	309,626	1906	760,448
1880	32,000	1889	71,659	1898	323,142	1907	1,175,975
1881	40,000	1890	91,650	1899	321,681	1908	1,754,022
1882	46,100	1891	87,717	1900	326,334		

CAN-MAKING PLANT.



American "Hemmed-edge" Can, showing how easily the end can be forced off.

"Rhodes" "Double-seamed" Can, after being heavily hammered the ends are just as firmly attached.

DOUBLE SEAMED CANS, as made by "Rhodes" Patent Machinery, are produced at **same or less cost** in every respect as the "Hemmed-edge" Can.

Sole Makers— **J. RHODES & SONS, Ltd.,** Grove Iron Works, WAKEFIELD, ENG.

OUR AMERICAN LETTER.

. . From Our Own Correspondent. . .

Pittsburg, *May 20th.*

The recent heavy rains have put the roads in such bad condition that it is next to impossible to continue field work. Many operators say they are in a worse condition than at any time last winter, and it will require a lot of good weather to place them in such shape as to make it possible to get material to the fields.

The greatest embarrassment from this cause is in localities where it was expected experimental work would be started. This kind of work will have to be delayed for some time. There is a good deal of that kind of work contemplated for the early spring months. The scarcity of new producing territory has stimulated the search for production in new territory, and the current year promises to be exceptional in testing new territory. In the lower South-west and South-eastern Ohio there are large blocks of territory that have not been thoroughly tested. Much of this will be gone over. The discovery of new pools in the old fields is still a possibility, and every nook and corner not condemned will be tried out during the summer.

Operators shew a disposition to take chances in localities that have been condemned by one or more dry holes in the past. With nothing better than congested pools in the old territory it is understood that it was not a hard matter to miss them by the drilling of a few tests. All of the new discoveries of the past two years, with the exception of Lincoln county, had been condemned.

One of the surprises lately has been the reduced quotations for credit balances. For more than two years the quotation had remained at one point $1·78, and a reduction was not anticipated. The reduction applied only to Ohio, Indiana and the Eastern fields. The reduction of five cents a barrel on high grade crude will not effect development work. However, should the market continue to decline it will shew its influence in depressing operations. Very little of the territory now under development in the Eastern fields is capable of furnishing anything better than light pumpers and in order to encourage the development of this kind of territory it will be necessary that the market be held at a high point.

The prevailing price demanded for settled production has never been so high as has ruled for the past two years. With a high and firm market, holders were not inclined to sell and as a result very little oil production has changed hands in the two years just closed. This of course does not apply to Illinois and the middle west fields.

In new territory landowners can secure high bonus for leases if the locations looks good. This has been demonstrated recently in the vicinity of the new 50-foot development in Harrison county, W.Va. Operators are eager to find new production and in some instances it looks as though their anxiety had run away with their better judgment. Where there is something that looks promising operators are to be found and nearly always ready to meet the demands of the farmer, with a liberal bonus and not unfrequently a higher royalty than has been the custom.

Avarice on the part of the landowner frequently makes him a loser on what, to him, would have been a sure thing. The operator takes all the chances on getting a dry hole, and he not only loses the cost of drilling the duster, but in addition loses the money he has paid as a bonus. It is a winning game for the farmer in either event. Should oil be found in paying quantities he is certain to get his one-eighth royalty and if he has no oil on his farm he is not out anything.

At Shinnstown, Clay district, the outlook for a pool of appreciable dimensions is very encouraging. In the light of recent completions in the new 50-foot pool it promises to prove a "frost" for the investors. Since the completion of the first two wells, both good producers, on the Hardesty and Nay farms, five wells have been drilled through the 50-foot, and all are light or dry. None shew an extension in any direction from the two good producers. The Thompson, Whiteman and Sapp farm tests are light producers, and would result in a dry hole. The Reed-Cox and Coon farm tests found no oil in the 50-foot, and so far have developed nothing in the lower formations.

The poor showing made by the new wells has caused the abandonment of a number of drilling wells, and possibly a score of locations that had been made. Unless there is improvement in the wells now drilling, these abandoned locations will not be drilled. The decline in development work in the Shinnstown pool promises to be as rapid as the rise. Had the territory shewed an extension there would be 20 strings of tools running in the district at this time. Some of the work under way will be completed, but the owners of the wells drilling are not enthusiastic over the prospects.

The South Penn Oil Co. is shortly due to get the sand at its No. 3, on the R. R. Hardesty farm. No. 2, on the same farm, has been shut down to await developments. The Philadelphia Co. should get the sand about the same time as No. 3 Hardesty. The Hardesty and Nay producers are holding up at 70 and 100 barrels, respectively. Even with the late completions very light, it looks as though these two wells are drawing from a source that would warrant the belief that other good producers could be found in that locality.

It must be admitted that present conditions are very discouraging and has nothing to inspire confidence. The investments in this territory have been heavy and some of those who pinned their faith to the development of a new pool are disappointed.

Lincoln and Roane counties continue to head the list in active development work in the lower south-west fields. While there is nothing sensational about the new completions, they are of sufficient size to increase the production of both developments. In Sheridan district, Lincoln county, a good many of the new wells have come in producers of gas in the Big Injun formation.

Efforts are still making to find production in the counties adjacent to Lincoln, but the efforts have proven futile. The holders of large acreage in Kanawha county have completed a good deal of work and found nothing but light gas. At this time there is very little experimental work starting in this county.

Wayne and Putnam counties have a little wildcat operations and Cabell has more new work starting than at any time in the past year. In other counties in the extreme lower south-west there will be a good deal of new work completed during the summer. Jackson county is receiving some attention. In previous tests drilled in this county some wells found oil in small quantities.

In the old districts, in both the deep and shallow sand territory, nothing out of the ordinary has been discovered. Operators are busy and will increase development work in all sections as soon as the roads improve.

In the Keener sand pool on Elm and Addis runs, in Grant district, Ritchie county, there is some new work starting. Next to Lincoln and Roane counties this development is furnishing more new production than any other district. Recent completions in Calhoun county have once more brought it to the front and it has more work under way and starting than at any time since the development of the Yellow Creek district three years ago.

Several additional good producers have been completed near Wheeling Junction, in Brooke county. For a time it did not look good for this pool, but there has been a decided improvement recently and development work is increasing.

South-eastern Ohio developments are not sensational. In the new pool, west of Steubenville, Jefferson county, some good producers were recently completed. The Osage pool, another Jefferson county attraction, has been defined. The new wells have come in light, dry, or small gassers.

South of Jerusalem, Monroe county, a Keener sand well was completed on the Moore-heirs' farm that promises to lead up to the development of a new pool. The well completed is purely a wildcat, and while not good for more than 15 barrels a day in the Keener sand, is accepted as a strike of some importance. Leasing in that locality has been quite active and some new work has been started.

The deep sand territory in Fairfield and Perry counties has nothing to offer as a special inducement for increased operations in the deep sand territory.

PRODUCTION OF ENGLISH COMPANIES IN RUSSIA.

BAKU RUSSIAN PETROLEUM CO., LTD.—The production for the week ended 22nd May was 188,300 poods, or 3,036 tons (exclusive of the production from properties recently let on lease); and for the week ended 29th May was 177,400 poods, or 2,860 tons.

RUSSIAN PETROLEUM AND LIQUID FUEL CO., LTD.—The production for the week ended 22nd May was 202,000 poods, or 3,257 tons; and for the week ended 29th May was 191,000 poods, or 3,079 tons.

SPIES PETROLEUM CO., LTD.—The production for the week ended 23rd May was 263,725 poods, or about 4,254 tons. The total production for year to 23rd May was 4,814,545 poods, or about 77,656 tons. The total production for the corresponding period last year was 4,856,785 poods, or about 78,335 tons. The output for the week ended 30th May was 232,255 poods, or 3,746 tons. The total production for year to 30th May was 5,046,900 poods, or about 81,402 tons. The total production for the corresponding period last year was 5,001,700 poods, or about 80,673 tons.

THE EUROPEAN PETROLEUM CO., LTD.—The production for the week ended 23rd May was 138,020 poods, or 2,225 tons; and for the week ended 30th May was 134,984 poods, or 2,176 tons.

GULF REFINING CO.,
Refiners of Oklahoma and Texas Petroleum.
We make a Speciality of
SUPERIOR LUBRICATING OILS *OF HIGH VISCOSITY AND LOW COLD TEST.*
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The American Oil Market.

New York, Week ended May 15th.

A further reduction of five cents in credit balance postings of crude in many of the Eastern fields has been rather an unexpected development, and its explanation is found in the same conditions noted in connection with the decline of the previous week, the congestion of stocks in the Illinois and Mid-Continent fields and the limitation upon the consuming movement. The higher grades of Pennsylvania crude are now quoted at $1·68, with the other varieties at a corresponding decrease. The second cut also affected the Lima grades as well as Somerset, Ky., but Ragland, Ky., crude has so far escaped the cheapening tendency. Quotations for Illinois and Mid-Continent crude are also undisturbed by the recent price developments in the other fields. According to latest advices, the Mid-Continent crude stock amounted to more than 56,000,000 barrels, representing a gain of about 16,000,000 barrels during the year, while there were stored in the Illinois fields on May 1st, about 27,000,000 barrels of crude, against 17,000,000 barrels in the corresponding day of last year. Stocks in other fields of the country, would, it is estimated, bring the aggregate well in excess of 100,000,000 barrels. The Illinois fields shew considerable activity, operators finding much encouragement in the maintenance of crude prices. While the established fields of Crawford and Lawrence counties furnished the great proportion of the new production, some results outside of the better defined limits may stimulate operations of a broader scope. Advices from the Mid-Continent field note quiet conditions generally, says the *Oil, Paint and Drug Reporter*, and in the shallow sand district particularly the excessive record of dry holes last month tending to restrict operations. The stock of Mid-Continent crude at the end of April is given as 56,136,419 barrels, but the prospects for a freer outlet by reason of greater pipe line facilities to the Gulf coast are regarded as more hopeful. The total pipe line runs for April in the Mid-Continent field reached nearly 3,500,000 barrels, the greater proportion of which was for consumption. The April review of the Gulf Coast region shews a slight decrease in the total production, but the daily average for the month is a trifle higher than that for March, owing to the less number of days in April. The decreased output was most impressive in the Jennings, La., field. The Sour Lake field presented the most favourable showing among the Texas returns last month, contributing the largest share of new production, and standing at a par with Humble in the best record of completions. The crude market of the Gulf coast region is credited with maintaining its firmer tendency, and contracts in the Texas fields are reported as on an 80 c. basis.

Refined and Products.—The local market for refined has continued on an even basis during the interval and there is little of particular interest to be noted in review. Values were declared to be steady on the recent ruling basis, but the further reduction in the higher grades of crude was not calculated to brighten the tone of the market. Domestic trading was without feature. The export movement involved larger proportions, 10,894,090 gallons, of which 7,775,000 were shipped in bulk, against a total of 9,874,190 gallons previously reported. More interest was manifested in forward shipment during the week, and engagements of 330,000 cases for Australia, New York loading, July-August, were reported. A decline of 1 cent in auto naphtha constitutes the principal development of the week in the local market for the products. Clearances of naphtha for the week amounted to 914,830 gallons, against 489,890 gallons during the previous week.

Shipments of crude, refined and naphtha from the local port during the week are detailed as follows:—Six tank steamers sailed from New York with petroleum in bulk for the week ending May 14th. They were: The British tank steamer, "Cuygahoga," for Bombay, with 2,000,000 gallons refined; the German steamer, "August Korff," for Flushing (for orders), with 1,850,000 gallons refined; the Spanish steamer, "Ciudad de Reus," for Valencia, with 682,125 gallons crude; the German steamer, "Prometheus," for Flushing (for orders), with 2,825,000 gallons refined; the German steamer, "Deutschland," for Flushing (for orders), with 1,075,000 gallons refined and 600,000 gallons naphtha, and the American steamer, "Texas," for Vera Cruz, and Tampa, with 612,650 gallons, and 1,042,900 gallons crude respectively. The British steamer, "Vennacher," which was chartered during February, also sailed for Freemantle, Melbourne. Sydney and Newcastle, with 133,668 cases refined and 24,550 cases naphtha.

CLOSING QUOTATIONS.

Crude at the Wells.

The quotations for oil represented by credit balances were:—

	Week ended May 15. 1908.	Week ended May 15 1909.
Pennsylvania	$1·78	$1·68
Tiona	1·78	1·68
North Lima	1·04	0·94
South Lima	0·99	0·89
Indiana	0·99	0·89
Illinois, heavy, below 30 deg.	0·60	0 60
Kansas and Indian Ter., 32 deg. and above	0·41	0·41
Heavy	0·28	0·28
Humble, Tex.	0·64	0·54
Saratoga	0·61	0·53
Sour Lake, Tex.	0·64	0·53
Jennings, La.	0·60	0·54
Santa Maria	—	1·00
Coalinga	—	0·60
Canadian Oil:—		
Petrolia	1·44	1·39
Oil Springs, less pipeage	1·51	1·46

Refined—For Export.

In cents.		Week ended May 15. S.W. 110 test.	Week ended May 15. W.W. 150 test.
Barrels, cargo	per gal.	8·50	@10·00
Philadelphia		8·45	@ 9·95
Bulk, New York		5·00	@ 6·50
Bulk, Philadelphia		4·95	@ 6·45
Cases, New York		10·90	@12·40
Cases Philadelphia		10 85	@12·35

Refined in Cases—110 Fire Test.

	Week ended May 8. 1909.	Week ended May 15. 1909
3,000 to 10,000	11·05	11·05
1,000 to 3,000	11·10	11·10

Refined—Jobbing Lots.

In barrels, pkgs. included.

	Week ended May 8.	Week ended May 15.
130 fire test, S.W.	11¾	11¾
150 fire test, W.W.	12¼	12¼
In bulk from tanks	9	9
200 fire test	13@13¾	13@13¾

Naphtha and Gasolene.

	Week ended May 8.	Week ended May 15.
Naphtha, V. M. and P. deod.	11	11
Gasolene, 86 deg.	21¾	21¾

Pennsylvanian Oil Runs from May 6th to May 12th were:—May 6th, 97,931; May 7th and 8th, 325,300*; May 9th, 39,828*; May 10th, 168,090*; May 11th, 214,731*; May 12th, 284,101.*

* Includes Illinois Oil.

The Deliveries of Pennsylvanian Oil from May 8th to May 13th were:—May 8th and 9th, 313,259*; May 10th, 187,732*; May 11th, 162,666*; May 12th, 289,880*; May 13th, 246,027*.

* Includes Illinois Oil.

Clearances for the Week.

During the week ended May 14th and since Jan. 1, the clearances of petroleum, in gallons, from the port of New York, were as follows:—

	Week.	Year.	1908.
Refined	10,894,090	206,195,420	224,485,045
Crude	2,337,675	15,430,375	8,246,950
Naphtha	914,830	15,490,900	4,026,925
Residuum	1,000	203,220	644,500

Export Statistics.

The total exports from the port of New York and from the United States have been:—

	Gallons.
From New York, week ended May 14th	16,863,128
Total from New York, from Jan. 1st, 1909	290,358,602
Same period last year	307,560,344
Decrease	17,201,742
From United States, week ended May 14th	27,206 902
Total from United States, since Jan. 1st, 1909	489,802,128
Same period last year	563,942,797
Decrease	74,140,669

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The “Review” Shipping List.

June 4, 1909.

(*The following abbreviations are used in this table:*—L. Left; P. Passed; Arr. Arrived; Sp. Spoken; Tr. Trading.)
Anglo-American Co.'s vessels marked thus (□): the Anglo-Saxon Co.'s tankers thus (*): and Messrs. Lane and Macandrew's thus (†).

Vessel.	From.	For.	Latest Date and Position.
ALCHYMIST	Marseilles	Selzaete	Arr. May 25
ALICE ET ISABELLE (Fr. bq.)	—	—	In Port Rouen, April 5, laid up
AMERICAN	New York	Antwerp	L. May 21
APPALACHEE □	Sabang	U.S.A.	At Port Natal, abt. May 21
APSCHERON	Trieste	Batoum	L. May 30
ARAL	Tyne	Philadelphia	P. Dunnet Head, May 27
ARAS	London	Penarth	L. June 2
ASHTABULA □	Hong Kong	San Francisco	S. Yokohama, May 23
ASTRAKHAN	Philadelphia	Dover	P. Del. Break., May 19
AUGUSTA	—	—	Off Southend, May 20, laid up
AUGUST KORFF	New York	Hamburg	Arr. May 26, in Port, May 30
AUREOLE	London	New Orleans	S. Ymuiden, May 21
BAKU STANDARD	—	—	In Port Cardiff, June 1
BALAKANI†	London	New York	P. Scilly, May 27
BATOUM	Tyne	Port Arthur (Texas)	Arr. May 30
BAYONNE	St. Louis (Rhone)	Philadelphia	Arr. May 18, in Port, May 22
BEACON LIGHT	Tyne	Kustendje	P. Constant'ple, June 2
BLOOMFIELD	Liverpool	Emden	Arr. abt. May 30
BORJOM	Batoum	Alexandria	Arr. April 13, in Port, May 21
BRILLIANT	Gothenburg & Tyne	Philadelphia	P. Butt of Lewis, June 2
BROADMAYNE	Tongsberg	Tyne	Arr. Feb. 13, in Port, June 1
BUFFALO	New York	Hamburg	L. May 26
BULLMOUTH*	Calcutta	Singapore	Arr. May 26
BULYSSES*	Singapore	—	P. Gibraltar, June 1
BURGERMEISTER PETERSEN	Philadelphia	Swinemunde	L. May 23
BUYO MARU	Yokohama	Lobitos	S l. Payta, April 19
CADILLAC	Philadelphia	Calcutta	P. Perim, May 20
CALCUTTA (B. b.) □	San Francisco	Shanghai	L April 8
CAPTAIN A. F. LUCAS (with S.O. Barge 95)	Rotterdam	New York	P. Scilly, May 20
CARDIUM*	Singapore	Europe	Sd, Port Natal, May 25
CARPATHIAN†	Port Arthur	London	L. June 2
CAUCASIAN†	London	Port Arthur (Texas)	P. Dover, May 15
CHARLOIS	Amsterdam	—	Sp. May 26, 45 N, 39 W.
CHESAPEAKE □	Tyne	New York	Arr. May 24
CHESTER	Antwerp	Tyne	Arr May 27
CHEYENNE	Philadelphia	Stockholm	P. Del. Break., May 20
CITY OF EVERETT (with S.O. Barge 94)	Philadelphia	Boston	L. May 15
CIUDAD DE REUS	New York	Valencia	L. May 8
CLAM*	Freshwater	Hankow	Arr. May 21
CONCH	Batoum	Kurrachee	P. Perim, May 27
CONRAD MOHR	—	—	In Tees, June 1
COWRIE*	Shanghai	Woosung	L. May 20
CUYAHOGA □	New York	Bombay	In Suez Canal, June 1-2
CYMBELINE	Portland	Penarth	Arr. April 17, in Port, June 1
CZAR NICOLAI II.	Hamburg	Batoum	P. Dardenelles, May 28
DAGHESTAN	Batoum	Thameshaven	P. Constant'ple, June 2
DAKOTAH □	San Francisco	Moji	Arr. May 18
DANUBIAN	Amsterdam	Port Arthur (Texas)	P. Prawle Pt., May 23
DELAWARE □	Barrow	New York	Arr. June 1
DERBENT	Batoum	Antwerp	P. Constant'ple, May 25
DEUTSCHLAND	Rotterdam	New York	P. Prawle Pt., May 31
DIAMANT	Hamburg	Philadelphia	Arr. June 1
EDWARD DAWSON	Hull	New Orleans	P. Sand Key, June 1
ELAX*	Bombay	Soesoe	Arr. May 26
ELISE MARIE	Swinemunde	Hamburg	Arr. May 19, in Port, May 30
El LOBO	Buenos Ayres	Lobitos	L. May 24
ENERGIE	Hamburg	Philadelphia	P. Lizard, May 20
ERIVAN	Tyne	Philadelphia	P. Lizard, May 20
ETELKA	Bordeaux	Kustendje	Arr. May 25
EUPLECTELA*	Shanghai	Singapore	L. May 23
EXCELSIOR	Hamburg	New York	Arr. May 30
FRANCE MARIE (French bq.)	New York	Marseilles	P. Tarifa, May 26
GEESTEMUNDE	Philadelphia	Swinemunde	P. Reedy Island, May 21
GENESSE □	London	Tyne	Arr. May, 27
GEORGIAN PRINCE	—	—	In Tyne, laid up
GOLDMOUTH*	Samboe	Channel	S. Las Palmas, May 27
GUTHEIL	Philadelphia	Havana	L. May 26
HAINAUT (Du. sh.)	New York	Antwerp	L. May 25
HARRY WADSWORTH	Hull	New Orleans	Arr. June 2
HELIOS	New York	Swinemunde	L. May 27
HERMIONE	Rotterdam	Cardiff	Arr. Mar. 22, in Port, June 1
HESPERUS	New York	Rotterdam	L. May 27
HOTHAM NEWTON	Tees	Batoum	P. Dover, May 30
HYRCANIA	Batoum	Hamburg	Arr. May 28, in Port, May 30
IOANNIS COUTZIS	Cardiff	Piræus	Arr. Mar. 3, in Port, May 26
IROQUOIS □ (towing barge Navahoe)	London	New York	Arr. June 1
J. B. AUG. KESSLER	Sabang	—	L. May 19
JAMES BRAND	Cardiff	Port Arthur (Texas)	Arr. May 22
JOYO MARU	Philadelphia & Amsterdam	London	Arr. June 3
JULES HENRI (French bq.)	Cette	Marseilles	Arr. Mar. 26, in Port, May 29
KURA	Port Arthur (Texas)	Stockholm	P. Butt of Lewis, May 29
LA CAMPINE	Philadelphia	Antwerp	P. Del. Break., May 20
LA FLANDRE	Ghent	Philadelphia	Arr. June 1
LA HESBAYE	Antwerp	Philadelphia	Off the Wight, May 28
LACKAWANNA □	Barrow	New York	Arr. June 1
LANSING	Port Harford	Panama	L. May 16
LE COQ†	Algiers	Philadelphia	L. May 16
LOUTSCH	Tyne	Novorossisk	Sd. Constant'ple, May 21
LUCERNA	Terdouck	Novorossisk	P. Constant'ple, June 1
LUCIGEN	—	—	In Tyne, April 20, ld. up
LUCILINE†	—	Dunkirk Rds.	Arr. June 2
LUMEN	Oporto	Tyne	Arr. April 12 Port, May 10
LUTETIAN†	Tyne	Kustendje	P. Gibraltar, June 2
LUX†	Bilbao	Tyne	Arr. May 30
MAKKAVEI	—	—	In Port Odessa, May 27
MANHATTAN	Batoum	New York	Arr. May 30
MANNHEIM	Philadelphia	Copenhagen	Arr. June 1
MARGARETHA	Hull	Kustendje	Arr. May 29
METEOR	Vladivostock	—	At Suez, June 1
MEXICAN PRINCE	Banes	U.K.	L. May 21
MINA BREA	Greenock & Cardiff	Callao & Talara	Sd. Las Palmas, April 30
MINHLA	Rangoon	Calcutta	L. June 1
MIRA	—	—	In Port Blyth, laid up
MUREX*	—	Soesoe	At Singapore, May 26
NARRAGANSETT	London	New York	Arr. May 14, in Port, May 19
NEW YORK □	Rotterdam	New York	L. June 2
NIAGARA	San Francisco	Madras & Calcutta	L. May 8

Vessel.	From.	For.	Latest Date and Position
OBERON	Port Arthur (Texas)	Cardiff	Arr. May 17, in Port, June 1
OCEAN	Antwerp	Baltimore	Arr. June 1
OILFIELD	Portland	Port Arthur (Texas)	At Norfolk (Va.), June 1
OKLAHOMA	New York	Port Arthur (Texas)	Arr. May 18
ORIFLAMME†	Malta	Bordeaux—River	L. May 30
OTTAWA □	London	Tyne	Arr. May 29
OURAL	Batoum	Rouen	P. Constant'ple, May 24
PATELLA	Tyne	Port Arthur (Texas)	Arr. May 27
PAUL PAIX	New York	Calais	Arr. May 31
PAULA	Philadelphia	Amsterdam	P. Lizard, May 31
PECTAN*	London	Tyne	Arr. April 21, in Port, May 25
PENNOIL	Tyne	New York	P. Dunnet Head, May 30
PETROLEINE	Tyne	Philadelphia	Arr. May 31
PHOEBUS	New York	Hamburg	Arr. May 19, in Port, May 23
PINNA†	Muroran	Talara	L. April 30
POTOMAC □	Buenos Ayres	St. Jago & New York	L. May. 26
PROGRESSO ARGENTINA (Ar. bq.)	Port Arthur (Texas)	Campana	Sp. Feb. 5 off Fowey Rks., Flda.
PROMETHEUS	Rotterdam	New York	Off the Wight, May 29
PRUDENTIA	Liverpool	Tees	Arr. May 18, in Port, June 1
PURELIGHT	Hamburg	Philadelphia	Sd. Tyne, May 25
QUEVILLY (Fr. bq.)	New York	Rouen	Arr. June 2
RENDOVA (Br. bq.)	New York	Corunna	Sp. May 12, 40 N., 50 W.
RION	Penarth	Newport	Arr. June 1
ROCK LIGHT†	Bermuda	Galveston	L. May 25
ROMANY*	Shanghai	Palembang	Arr. May 28
ROTTERDAM	New York	Antwerp	Arr. June 1
ROUMANIAN†	Catherines	Philadelphia	L. May 24
RUSSIAN PRINCE	Tyne	Cienfuegos	Arr. May 28, Sd. May 31, U.K.
SALAHADJI	Balekpappan	—	S. C'l'mbo, May 18
SAN CRISTOBAL	—	—	In Port Liverp'l, June 2
SAN IGNACIO DE LOYOLA (Sp. bq.)	Pasages	New York	L. May 27
SANTA MARIA	Taltal	Pt. San Luis	L May 15
SANTA RITA	Panama	Pt. San Luis	L. May 16
SARANAC □	Venice	Sandy Hook	P. St. Michaels, May 25
SAXOLEINE	New York	La Pallice	L. May 20
SCHUYLKILL	Cebu	Boston & New York	At Boston, May 25
SEMINOLE □	Karatzu	San Francisco	Arr. May 31
SERVIAN†	Newport News	Antwerp	P. Dover, June 2
SNOWFLAKE	Tyne	Cuba	P. Dover, May 29
SOYO MARU	Yokohama	Uraga	L. April 4
SPONDILUS*	Cardiff	Singapore	Sp May 14, 18 S., 5 E.
STANDARD	Baltimore	Danzig	P. Cape Henry, May 19
STROMBUS*	Rotterdam	Thameshaven	Arr. May 28, in Port, June 2
SULTAN VAN LANGKAT	Balekpappan	Singapore	L. April 29
SUN	Sabine	Philadelphia	Arr. Mar. 27
SUNLIGHT (Br. bq.)	Cardiff	Port Arthur (Texas)	P. Barry Island, May 22
SURAM	Batoum	Gothenburg	P. Constant'ple, May 24
SUWANEE □	New York	Barrow	P. Fastnet, June 2
SVIET	Batoum	Odessa	L. April 25
TAMARC □	London	Baltimore	Arr. May 25
TELENA*	Sabang	Port Natal	L. May 20
TEREK†	London	Kustenje	Arr. June 1
TEXAS	Port Arthur (Texas)	Philadelphia	Arr. May 5
TIFLIS	Batoum	Liverpool	Sd. Constant'ple, May 19
TIOGA □	Liverpool	New Orleans	P. O. Hd. Kinsale, May 23
TONAWANDA □	Hong Kong	San Francisco	Arr. April 23, in Port, May 21
TRINCULO	London	Newport	Arr. May 29, in Port, June 1
TROCAS	Freshwater	Adelaide	L. May 26
TUSCARORA	Blexen	Tyne	L. June 2
VEDRA	—	—	In Tyne, laid up
VILLE DE DIEPPE (Nor. bq.)	Philadelphia	Rouen	P. Havre, May 29
VOLUTE	Balekpappan	Shanghai	Arr. May 26
WASHINGTON	Singapore	Portished	Arr. May 31
WASHTENAW	—	—	At or near San Francisco, May 7
WEEHAWKEN	Kustendje	London	L. May 27
WILLKOMMEN	New York	Danzig	At Stettin, May 27
WINNEBAGO	Shanghai	—	L. May 7

Latest Market Intelligence.

LONDON OIL MARKET.

Supplied by Messrs. Benjamin & Gee, 31, St. Mary Axe, E.C.

June 4th, 1909.

There are no alterations to register in the prices of Refined Petroleum, which remain as follows:—Russian, 6d.-6¼d.; American, 6¼d.-6⅜d.; Water White, 7¼d.-7⅜d.; Roumanian, 7d.

LUBRICATING OILS

are unchanged, the latest quotations being for :—

American pale, £6 10s. to £10 10s.
American dark cylinder, from £8.
American filtered cylinder, from £11 5s.
No. 1 Russian, for Spot, £8 2s. 6d.

TURPENTINE.

American Turpentine after being as high as 29s., is now quoted for Spot 27s. 9d.; and for July/December, 28s. 3d.

LIVERPOOL OIL MARKET.

June 3rd.

Refined oils are quiet, and sellers quote 6¾d., for Russian, Galician or Roumanian; and 7¼d. to 8¼d. per gallon for American.

Petroleum Spirit continues at 1s. 0d. to 1s. 2d. per gallon for duty paid lots, at which price there is a fair demand ruling.

LATEST AMERICAN PRICES.

New York, June 3rd.

Refined, in cases, is steady at 10·90; Standard White, 8·50; Credit balances, 1·68.

Philadelphia, June 3rd.

Standard White is now quoted at 8·45.

RUSSIA.

Baku, June 2nd.

The Baku oil market remains unchanged. Crude oil, spot, 22 copecs per pood. Residuals, 22 copecs. Kerosene, in ships, 29½-30 copecs.

BELGIUM.

Antwerp, June 3rd.

The petroleum market is firm. Price of Standard White, spot, 22 francs per 100 kilos.

FRANCE.

Paris, June 4th.

Illuminating oil is quoted in bulk, in whole tank waggons, 23·50 francs per hectolitre; spirit, 33·75 francs per hectolitre. Special white oil, in barrels or cans, 31·50 francs per hectolitre.

GERMANY.

Hamburg, June 3rd.

The kerosene market is unchanged. The price of American Standard White is 7·20 marks per 50 kilos.; Galician, 6·75 marks. Russian and Roumania not offered.

HOLLAND.

Amsterdam, June 3rd.

The petroleum market remains firm. American Standard White, spot, 12·20 florins per 100 kilos.

ROUMANIA.

June 2nd.

	Francs.
Crude oil from different fields, including pipe line charges, per 100 kgs.	4·70
Refined oil, exclusive of taxes, ex. refinery	8·70
Residuals in tank waggons, at refinery	4·35
Paraffin	130
Prices for Export.	
Refined oil, f.o.b., per 100 kgs.	7·25–7·75
Benzine, sp. gr. 0·710–0·715, f.o.b.	18
„ sp. gr. 0·715–0·720 „	15·50
„ sp. gr. 0·730–0·740 „	11
„ sp. gr. 0·745–0.755 „	10
Lubricating, horticultural	32
„ prime	37
„ extra	42
„ royal	46

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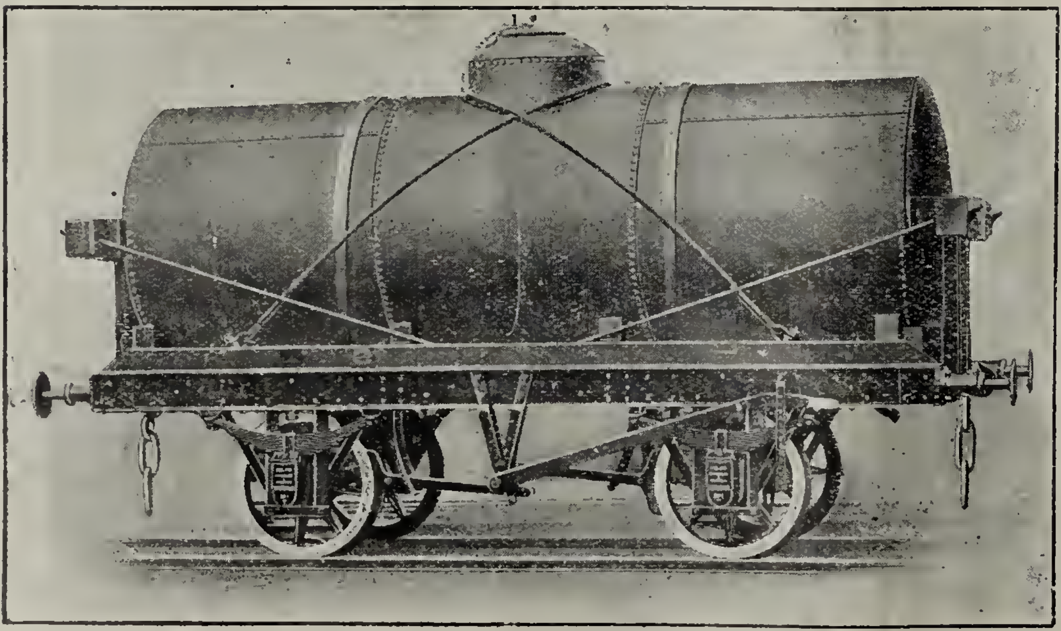
IMPORTS of PETROLEUM into UNITED KINGDOM

Specially prepared for this Journal by the Custom House.

FOR THE WEEK ENDED MAY 24TH, 1909—

Date.	Port and Importers.	Description.	No. of Gals.	Port Whence.
May	LONDON—			
18	Port of London Authority	Lub.	1,080	Hamburg
18	Van Dam and Co.)	Lub.Gr.	260	Rotterdam
18	British Pet. Co. (Balakani	Gas	1,308,000	Philadel.
18	Ragosine and Co.	Lub.	200	Antwerp
18	Argo Steamship Co.	,,	240	Bremen
19	T. H. Lee	,,	826	Hamburg
19	Anglo-American Oil Co.	,,	38,760	New York
20	Page, Son and East	Lub. Oil and Gr.	440	Antwerp
20	United Shipping Co.	Lub.	200	Riga
20	Van Dam and Co.	Tar Oil	1,990	Rotterdam
27/4	G. T. Symons and Co.	Lamp	800	Rouen
21	Anglo-American Oil Co. (Genesse)	Gas	967,890	Philadel.
21	,, (Ottawa)	,,	565,290	,,
21	Meade-King, Robinson & Co. (Trinculo)	,,	1,763,750	Pt. Arthur
24	Schlieman's Oil Works	Lub. Gr.	60	Hamburg
24	,,	Lub.	2,500	,,
24	Mordaunt Bros.	Lamp	10,000	,,
24	T. H. Lee	Lub. Oil and Gr.	140	,,
24	Port of London Authority	Lub.	7,000	,,
24	J. Harrison, Ltd.	Lub. Gr.	70	Antwerp
24	Page, Son and East	Lub.	600	,,
24	British Petroleum Co.	Lamp	40	,,
24	J. C. Goodall	Lub.	4,100	St.Petersbrg.
24	Anglo-American Oil Co.	,,	4,000	New York
24	A. H. Post and Co.	L.Comp.	160	,,
24	Argo Steamship Co.	Lub.	300	Bremen
	LIVERPOOL—			
18	Fellows. Morton & Clayton	,,	1,800	New York
18	G. B. Taylor	,,	12,360	,,
18	Liverpool Storage Co.	,,	7,600	,,
18	,,	M. Colza	6,360	,,
18	W. B. Dick and Co.	Lub.	2,380	,,
18	D. Owen and Son	,,	3,540	,,
18	Ismay, Imrie and Co.	,,	1,080	,,
19	Pickfords	,,	120	Hamburg
19	D. Owen and Sons	,,	1,480	,,
20	Bancroft and Co.	,,	250	Antwerp
20	Anglo-American Oil Co. (Potomac)	Lamp	1,301,600	Philadel.
20	A. Hopps and Sons	Lub.	10,480	N. Orleans
20	Meade-King, Robinson & Co.	,,	5,200	Baltimore
21	D. Currie and Co.	Lub. Gr.	200	Hamburg
24	Schlieman's Oil Works	Lub.	990	,,
24	C. W. Field	,,	290	Antwerp
24	Ismay, Imrie and Co.	,,	1,080	New York
24	Burnaby and Chantrell	Lub. Gr.	1,230	,,
	BRISTOL—			
18	Anglo-Bosphorus Oil Co.	,,	1,800	,,
19	H. R. James and Sons	,,	20,740	,,
19	W. G. Clarke	,,	120	Antwerp

Date.	Port and Importers	Description.	No. of Galls.	Port Whence.
May				
21	Pickford's, Ltd.	Lub. Oil and Paste	950	Hamburg
21	E. Stock and Sons	Lub.	2,000	,,
24	Anglo-American Oil Co. (Ottawa)	R.Gas	423,970	Philadel.
	GRIMSBY—			
18	J. Sutcliffe and Son	Lub,	240	Antwerp
	HARWICH—			
21	D. Howard	,,	240	,,
21	,,	Lub. Gr.	560	,,
	HULL—			
18	W. Gilyott and Co.	Lub.	40,640	New York
18	Wilsons and N.E. Co.	,,	440	Hamburg
20	,,	,,	2,400	Ghent
20	,,	,,	200	Antwerp
21	Hull & Netherlands S.S. Co.	,,	200	Amsterdam
	MANCHESTER—			
19	Worthington and Boler	,,	400	Philadel.
20	W. H. Ingram	,,	640	Riga
20	W. Hodgson and Co.	,,	2,160	,,
20	Lamport and Holt	,,	240	New York
20	Bramwell, Fern and Co.	Lamp	2,960	Philadel.
20	Diamond Lubricating Co.	Lub.	3,400	,,
20	Bramwell, Fern and Co.	,,	65,960	,,
20	Meade-King, Robinson & Co.	M.Colza	2,600	,,
20	,, ,,	Lub.	7.600	,,
20	G. B. Taylor	,,	69,880	,,
20	Crew, Levick and Co.	M.Colza	4,600	,,
20	,,	Lub.	780	,,
	MIDDLESBRO'—			
24	T. R. Dent	,,	250	Rotterdam
	NEWCASTLE—			
18	Tyne-Tees Steamship Co.	,,	2,660	Antwerp
21	,,	,,	240	Hamburg
	PLYMOUTH—			
19	F. Nicholson and Co.	,,	90	,,
	SOUTHAMPTON—			
20	White Star Line	,,	8,880	New York
20	P. E. Curry	,,	240	,,
	DUNDEE—			
20	D. Alexander and Sons	,,	3,960	Hamburg
	GLASGOW—			
18	Clyde Shipping Co.	,,	80	Antwerp
18	Anchor Line	,,	24,110	New York
19	J. and A. Allan	,,	89,640	Philadel.
24	Anchor Line	,,	26,600	New York
	GRANGEMOUTH—			
18	J. Currie and Co.	Lub. Oil and Paste	810	Hamburg
18	W. Graham-Yooll and Co.	Lamp	2,400	,,



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No corrosive fumes given off. Prevents rust at the joints and consequent leakage. Stronger work. Less solder required.

IMPORTS.—(*Concluded*).

Date.	Port and Importer.	Description.	No. of Galls.	Port Whence.
May				
	GRANGEMOUTH—			
24	W. Graham-Yooll and Co..	Lamp	2,000	Hamburg
24	J. Currie and Co.	Lub.	880	,,
	LEITH—			
18	Geo. Gibson and Co. ..	,,	510	Antwerp
20	,, ..	,,	140	,,
20	J. Currie and Co.	,,	480	Hamburg
20	W. Graham-Yooll and Co...	Lamp	8,720	,,
22	,, ...	,,	2,570	,,
24	J. Currie and Co.	Lub.	80	,,
24	,, ...	,,	280	Bremen
	BELFAST—			
20	J. C. Pinkerton and Co. ..	,,	50	Hamburg
	CORK—			
18	Palgrave, Murphy and Co.	,,	40	,,
			6,866,066	
	Deduct to correct—			
	LONDON—			
9/3	Scott's Wharf	,,	3,006	New York
	BRISTOL—			
11/5	J. and R. Bush	,,	4,000	,,
	Total for the Week ..		6,859,060	

FOR THE WEEK ENDED 31ST MAY, 1909—

Date.	Port and Importers.	Description.	No. of Galls.	Port Whence.
May	LONDON—			
23	Worthington and Boler ..	Lub.	5,800	Philadel.
23	Mordaunt Bros.	,,	8,800	New York
23	R. Park and Co.	,,	640	Marseilles
23	Argo Steamship Co. ..	,,	50	Bremen
26	Port of London Authority..	,,	3,120	Hamburg
26	Lub. and Fuel Oils Co.	,,	5,330	Philadel.
26	Juett and Cain	,,	4,800	,,
27	D. Roberts	Lub. Gr.	4,800	,,
27	Mordaunt Bros.	Lub.	5,250	,,
27	Juett and Cain	,,	4,800	,,
27	,, ..	,,	4,800	,,
27	A. Brown and Co.	,,	10,000	,,
27	Page, Son and East ..	Lub. Oil and Gr.	520	Antwerp
27	A. Brown and Co.	Lamp	4,000	Philadel.
28	Schlieman's Oil Works ..	Lub. Oil and Gr.	3,940	Hamburg
28	Consolidated Petroleum Co. (Aras)	Lamp	1,290,000	,,
28	B. Jacob and Sons, Ltd. ..	Lub.	2,400	Philadel.
28	W. B. Dick and Co. ..	,,	21,500	,,
28	Mercantile Lighterage Co...	,,	22,230	,,
28	Anglo-American Oil Co. ..	,,	110,800	,,
29	British and Foreign Wharf	Tar. Oil	140	Antwerp
29	Mordaunt Bros.	Lub.	5,400	Baltimore
	LIVERPOOL—			
25	Liverpool Storage Co. ..	Lub.Gr.	200	Antwerp
25	Penwarden and Jackson ..	Lub.	400	,,
25	Roward and Co.	,,	40	,,
25	Bowring Petroleum Co. ..	,,	1,750	New York
25	,, ..	,,	840	Philadel.
25	Vacuum Oil Co.	,,	25,760	New York
25	D. Owen and Sons	,,	2,820	,,
26	Worthington and Boler ..	,,	3,400	Philadel.
26	Meade-King, Robinson & Co.	,,	24,760	,,
26	J. Light and Son	,,	2,000	New York
26	G. B. Taylor	,,	33,560	,,
26	,, ..	,,	24,600	Philadel.
26	D. Owen and Son	,,	1,860	,,
26	Burnaby and Chantrell ..	Lub. Gr.	1,340	New York
26	Dee Oil Co.	Lub.	80	Dunkirk
26	H. Parry	,,	160	Riga
27	Crew, Levick and Co. ..	,,	8,970	Philadel.
27	,, ...	M.Colza	5,140	,,
27	Schlieman's Oil Works ..	Lub.	450	Hamburg
27	Pickfords	Lub. Oil and Gr.	250	,,
27	Liverpool Storage Co. ..	Lub.	3,720	New York
27	W. B. Dick and Co. ..	,,	20,400	Philadel.
27	Bramwell, Fern and Co. ..	,,	3,510	,,
27	Stockdale and Doel ..	,,	8,150	Boston
27	American Line	,,	14,400	Philadel.
27	Bowring Petroleum Co. ..	,,	3,440	,,
28	Meade-King, Robinson & Co.	,,	15,600	Baltimore
28	A. Hopps and Sons	,,	10,620	,,
29	Schlieman's Oil Works ..	,,	1,600	,,
29	Meade-King, Robinson & Co.	,,	2,600	,,
29	J. Light and Son	,,	2,000	Hamburg
May	BRISTOL—			
25	Pickford's	Lub.Oil and Paste	250	Hamburg
28	British Pet. Co. (Rion) ..	Lamp	421,000	Batoum
29	H. R. James and Son ..	Lub.	33,800	New York
29	,, ...	M.Colza	14,600	,,
	CARDIFF—			
26	Homelight Oil Co. (Rion) ..	Lamp	401,220	Batoum
	GOOLE—			
27	Goole Steamship Co. ..	Lub.	190	Hamburg
	GRIMSBY—			
25	J. Sutcliffe and Son	,,	90	Antwerp
25	,, ...	,,	40	,,
25	,, ...	,,	240	Hamburg
25	,, ...	,,	260	Rotterdam
	HARWICH—			
25	D. Howard	Lub. Gr.	90	Antwerp
27	,, ..	Lub.	690	,,
	HULL—			
25	T. Wilson, Sons and Co. ..	,,	91,560	New York
25	Wilsons and N.E. Co. ..	,,	880	Antwerp
25	,, ..	,,	1,200	Hamburg
25	T. Wilson, Sons and Co. ..	,,	1,200	Reval
27	G. Hardy and Co.	,,	270	Antwerp
27	W. Gilyott and Co... ..	,,	39,640	New York
27	T. Wilson, Sons and Co. ..	,,	320	Bergen
27	Wilsons and N.E. Co. ..	,,	240	Hamburg
	MANCHESTER—			
27	C. H. Morton and Sons ..	,,	1,600	Philadel.
27	Bramwell, Fern and Co. ..	,,	63,360	,,
28	,, (Tiflis)	,,	143,280	Batoum
28	,, ..	,,	5,000	,,
28	Meade-King, Robinson & Co.	,,	5,000	,,
28	,, (Tiflis)	,,	143,280	Batoum
28	W. Hodgson and Co. ..	,,	8,960	New York
28	Meade-King, Robinson & Co.	,,	10,400	Hamburg
28	Pickfords	Lub. Oil and Paste	120	,,
	NEWCASTLE—			
25	Tyne-Tees S.S. Co. ..	Lub.	2,800	Antwerp
29	,, ..	,,	2,400	,,
29	,, ..	,,	2,160	Hamburg
	SWANSEA—			
25	Bristol S. Navigation Co. ..	Lub Gr.	1,280	Antwerp
	DUNDEE—			
27	D. Alexander and Sons ..	Lub.	2,880	Hamburg
	GLASGOW—			
27	J. and A. Allan	,,	1,000	Boston
	LEITH—			
27	G. Gibson and Co.	,,	550	Antwerp
27	J. Currie and Co.	,,	640	Hamburg
28	W. Graham-Yooll and Co...	Lamp	3,270	,,
	BELFAST—			
25	J. C. Pinkerton and Co. ..	Lub. Oil and Gr.	350	Antwerp
	DUBLIN—			
27	Palgrave, Murphy and Co.	Lub.	500	,,
			3,150,150	
	LONDON—			
24	Asiatic Petroleum Co. (Tuscarora)	Benzine	1,627,080	Pulo Samboe
26	,, (Strombus)	,,	1,043,020	,,
28	,, ,,	,,	753,730	Rotterdam
	BRISTOL—			
29	Asiatic Petroleum Co. (Washington)	Spirit	24,000	Singapore
			6,597,980	
	Deduct to Correct—			
	DUBLIN—			
4	Alliance and Dublin Consumers Gas Co. (J. Brand)	Gas	468,310	Baltimore
	Total for Week		6,129,670	
	Total for the Fortnight ..		12,988,730	

◆

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The Petroleum Review.

By PAUL DVORKOVITZ.

Vol. XX. *(New Series.)* June 19th, 1909. No. 453

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Editorial Notes.

Progressive Roumania.

We have so recently dwelt upon the continuous growth of the petroleum industry in Roumania, that it seems almost unnecessary even to publish the figures which have just been circulated by the British Consul in Roumania in his recent report upon the trade of that country for the past year. There is, however, one portion of his report which at once becomes more than ordinarily interesting, and this has reference to Roumania's petroleum trade with England. The British Empire continues to be Roumania's best customer for petroleum and its products. For instance, last year the United Kingdom took 44,000 tons of Roumanian crude, gas oil and residuals; 42,000 tons of refined petroleum; and 19,000 tons of crude or refined benzine, making a total of 105,000 tons, or nearly 25 per cent. of the whole petroleum export. Then India took 3,000 tons of crude and 16,000 tons of refined products, while Egypt received 80,000 tons of Roumanian refined petroleum products. Thus the United Kingdom, India and Egypt take nearly one-half of Roumania's total petroleum exports. France comes next, and then respectively we find Turkey, Germany, Italy, Belgium and the Netherlands.

A Good Dividend for the Spies Shareholders.

The most pessimistic person will readily admit that the Spies Co. has at last turned the corner, and, thanks to careful management in London and the competent conduct of the work on the oil fields, there is every reason to assume that a period of continuous and increasing prosperity is in store for it. At Thursday's meeting of shareholders the chairman had the envious duty to perform of declaring a 12½ per cent. dividend, and those who carefully followed his remarks would note that greater things may be expected in the future. There is no doubt about it that this dividend was largely made up as a result of the great production from the fountain upon the Baskakoff plot, but, after all, like angels' visits, fountains are few and far between, and have that unhappy knack of being but of short duration. The famous well No. 5 on the Baskakoff plot no longer spouts, but what is even more gratifying than a spouter is that the baling production for the first five months of this year has exceeded the high level of production attained during the corresponding period of last year, when the fountain was pouring forth its liquid contents. It is well known that a baling production is always to be preferred to the spasmodic yield of spouters, and thus the Spies Co. may be said to be not only doing remarkably good things, but to have greater things in store.

The American Oil Fields During May.

The American oil field operations during May were particularly active, and, contrary to expectations, the cut in the price of crude early in the month did not in any way tend to minimise the energy displayed in almost every field. In the territories producing Pennsylvanian oil, the result of the month's operations was that there was not only a gain in the number of completed wells, but also in the amount of new production. The Mid-Continental fields, too, displayed considerable activity, in spite of the desire in many quarters to curtail production as much as possible. In fact, the new production for May was over 20,000 barrels, and for the present month it is quite possible that these figures will be exceeded. In California and Texas, too, the results of the month's operations are very satisfactory, several highly promising extensions of the older producing localities having been tapped in both States.

Movements in the Grosny Petroleum Industry.

The Grosny petroleum industry has now reached that stage of active development when it is necessary for the taking of steps which will tend to secure for it permanent progress and expansion. In this direction there are two views held by the producers, either of which, if carried out, would go a long way toward expansion. One is the tendency of the producers to direct their oil into Novorossisk and Tzaritzin, and then transport it from those places. One of the main causes for the putting forward of this idea has been the recent rise in the tariffs in the Grosny-Petrovsk route, which has practically closed the Volga and also the Caspian Sea as the great waterways for the transport of Grosny oil. The second projected plan of action—and one which is being received with considerable support—is that of building a pipe line from the Grosny fields to Petrovsk, so that the Grosny oils may avail themselves of several of the interior markets. This latter scheme has been recently discussed before a conference of the Grosny producers, and no doubt if carried through would prove a great blessing to the industry at large. But there is a great difficulty which bars the way at present, and that is the enormous amount of funds which would be needed. Thus, for the present, the realisation of this project seems out of the question, much as it may be desired, and great as would be the advantage it would bring to the Grosny producers.

THE TIN PLATE MARKET.

Messrs. Norton, Owen & Co., of 4, Bishopsgate Street Within, London, E.C., report under date June 17th, 1909, as follows: —

Prices are higher and very firm, further heavy business having been put through for delivery in the ensuing half year, although some makers decline to sell forward owing to the fear of labour difficulties next month. The returns of shipments of tin plates shew a considerable increase on the whole, as will be seen from particulars we give below. We make prices of oil sizes to-day :—

IC 18¾ × 14	124 sheets	110 lbs.	12/4½	per box.
IC 19½ × 14	120 ,,	110 ,,	12/4½	,,
IC 20 × 10	225 ,,	156 ,,	17/6	,,

F.o.b. Wales. Tin lining and iron hooping extra.

SHIPMENTS OF TIN PLATES.

	May 1908. Tons	May 1909. Tons	Jan.-May 1908. Tons	Jan.-May 1909. Tons
Russia	81	49	4,020	3,656
Germany	3,612	2,989	13,673	12,087
Holland ..	2,133	3,752	10,576	12,908
Belgium	878	590	4,057	4,049
France	2,471	1,895	11,970	8,146
Portugal	591	1,497	4,326	5,808
United States ..	7,692	6,250	29,722	25,224
British East Indies	3,748	4,692	20,031	22,760
Australia	1,578	1,483	8,835	8,246
Canada	1,538	3,090	5,646	12,376
Other countries ..	11,785	12,976	59,073	60,826
Total .. Tons	36,107	39,263	171,929	176,086

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The Baku Russian Petroleum Co., Ltd.—We have received a circular signed by Messrs. W. Watson Rutherford and A. C. Holzapfel on behalf of the shareholders' committee of the above company, in which they state that they have not been consulted as to the project which the directors are placing before the meeting next Monday. Their principal objection, they state, is that no provision is made for competent management, and so if the board continue to decline their proffered co-operation, they will become dissentient shareholders, and seek to obtain some compensation for their shares.

Omission.—We regret to state that in our last issue we omitted to mention that M. M. Guiselin, of Paris, was appointed Secretary of the Bureau of the Standardisation Committee during its London sittings.

THE MURDER OF MR. I. M. BORISSOFF.

We regret to announce that at Baku, on the 8th inst., the manager of Messrs. Mirzoeff and Co.—Mr. I. M. Borissoff - together with his driver—S. Taraplin—was murdered. The assassination was committed on a plot situated between the properties of Voronzoff-Daghkoff and Schibaieff. The first shots killed the driver and wounded the horse, and then by another shot Mr. I. M. Borissoff was mortally wounded. Several attempts had previously been made on his life, and in one of the pockets of his coat a letter was found in which an anonymous "friend" wrote informing him of his coming death.

NEW ENGLISH COMPANY.

MADAGASCAR OIL DEVELOPMENT COMPANY.

Registered June 4th, £50,000. To acquire about 190,000 acres of land on the West Coast of Madagascar, near the River Manambao, to adopt agreements (*a*) with Ankavandra Oil Co., Ltd., and (*b*) with Madagascar Bitumen Syndicate, Ltd., and to carry on the business of oil, bitumen, and turpentine producers and refiners, asphalt manufacturers, etc. The signatories are :—

	Shares.
F. W. Baker, 3, Princes Street, E.C.	500
R. Phipps Hornby, Farnham Common, Bucks ..	500
J. Bogaerts, 135, Boulevard du Nord, Brussels ..	200
L. G. Schlesinger, 47, Boulevard Haussmann, Paris	500
T. Thornton, 119, Finsbury Pavement, E.C. ..	250
J. A. Henderson, 11, Pancras Lane, E.C. ..	1
W. P. Hewitt, 5, Bedford Row, W.C.	1

Minimum cash subscription, half the shares offered to the public. First directors (not less than five nor more than nine): F. W. Baker (chairman) (managing director Hirsch Syndicate, Ltd.), L. G. Schlesinger, J. Bogaerts (administrateur de la "Lubricating Oil Compagnie, Belgium"), R. Phipps Hornby (director National White Oil Co., Ltd.), and three others to be nominated by the Ankavandra Oil Co., Ltd. 50 shares. £125 each per annum (chairman £150). 11, Pancras Lane, E.C.

SITUATION VACANT.

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THE CLASSIFICATION OF PETROLEUM DEPOSITS.

By PROF. L. MRAZEC.

General classifications of deposits of minerals and useful rocks are principally based on their genetic conditions. A just conception of the origin of a deposit will always give a clear idea of its value and of the way of its accumulation, but while all minerals are formed into deposits of permanent equilibrium, no petroleum accumulation shews such a state of permanency. The least change in the conditions of a petroleum deposit produces a rupture in the state of its equilibrium, and even destroys it altogether. As we have already seen, the accumulation of a petroleum deposit is associated with the orogenetic movements of the region in which it is found. The classification of petroleum deposits must, therefore, necessarily be based on purely tectonic principles.

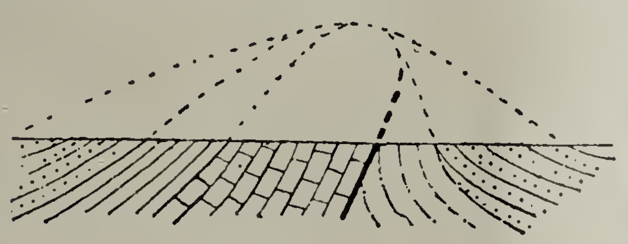
From a broad point of view we can divide all petroleum deposits into two classes:—

I. Deposits in Regions Shewing Little Dislocation.—This class is represented (1) by the paleozoic deposits in the United States (Ohio, Pennsylvania, etc.), where the oil is found in the large domes of little dislocation; (2) by the deposits in North Germany, restricted to the bituminous aureola of the immense salt deposits accumulated in the permian, etc.

II. Deposits of Regions Intensely Dislocated.—This class can be divided into three groups:—(1) Deposits lying on anticlinals; (2) deposits of regions of diaperic foldings; and (3) deposits of regions of so-called webs of overfoldings.

Under the first of these headings we understand anticlinals, the strata of which belong to different geological periods, are parallel and equally developed, and in which consequently the order of stratification of the different layers has not changed. This type of petroliferous region is never met with in its pure form.

The diaperic folds are foldings having their kernel strata much more inclined than their roof strata these latter getting the more horizontal the farther they are from the axis of the kernel. This type has for the first time been recognised in Roumania, but since then it has been met with not only in the Carpathian regions but in all regions of the earth crust which shew more recently-formed foldings.

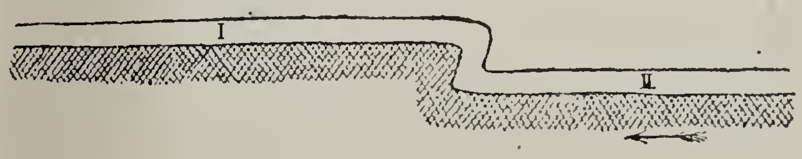


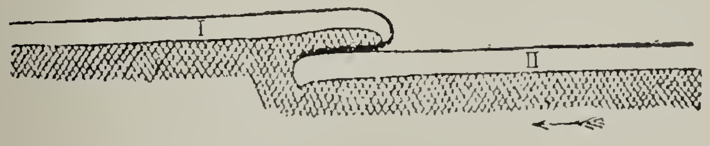
The kernels belonging to a geological stratum of older origin rise and pierce through the newer strata which glide along the former, and dispose themselves in a manner something alike to a roof, the tiles of which all are inclined towards the top (see Fig. 1). But when the older geological stratum still pushed from below continues its movement the kernel is entirely replaced from its original position, and forms what is called a clype of the pienien type (as shewn in the sketch). The whole movement can be compared to an accumulation of blocks of ice pushed from below, one on top of others. These diaperic foldings probably are the first phase of formation of the so-called webs of overfoldings.

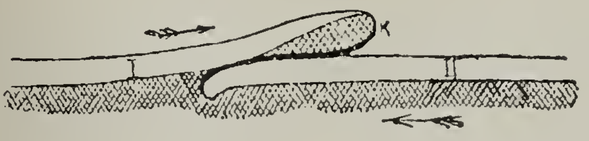
The regions of diaperic foldings are thus characterised by the appearance of rocks of older origin in the midst of a series of formations of much younger origin, and in their structure they are like stairs, at the top of which are the piercing lines separated by layers of asymmetrical structure. In these regions of diaperic folds, the accumulations of petroleum are restricted to the piercing lines, and the petroleum rock forming the kernel of the region is in direct contact with the younger formations.

It is now proved that the most of the dislocated regions of the earth crust are constituted by a system of drifted together and superposing one another webs. This disposition is due to a phenomenon analogous to the formation of diaperic foldings, the web being formed of strata older than the substratum along and on top of which they have glided. A rupture produced by orogenetic movements or by erosions will expose the autochtone substratum, which will thus look out as from a "window."

According to geological researches made independently in Galicia and Roumania, the zone of Carpathian limestone is composed of such superposed webs formed of cretaceous and paleogenic strata.







In the regions of long ridges, formed by webs, the rocks in which the petroleum deposits are accumulated may be connected either to the geological strata forming the system of webs, or to the rocks of the autochtone. On the right solution of this question will depend all our understanding of the region and the way of their exploitation.

The hydrocarbons according to our actual knowledge accumulate in their deposits by the only way of ascensional migration. This migration will be more intensive in the regions where the webs are pressed together, and the more so in the lower web or webs. The best conditions for the formation of petroleum deposits, and for accumulation of oil in them, will consequently be found on the points, lines, and surfaces of accumulation of the webs, where they present the least possible resistance to the movement of the oil, and where are the most chances for the porous rocks to conserve the deposit.

If the petroleum deposits are contained in the autochtone, three general cases are to be considered:—(*a*) The webs of the oldest rocks gliding over the rocks of the autochtone on a plan of little undulation and almost horizontal could not produce a migration favourable to an accumulation; even if there are porous rocks there will be produced instead a dispersion of the hydrocarbons and a vertical movement in direction opposite to the ascensional movement of the oil; (*b*) but if by the movement of the webs in the midst of the strata of the autochtone there are formed heaps of broken strata affecting in their pressure both the autochtone and the limitrophe parts of the web, petroleum deposits will be formed whenever there are porous rocks to take the petroleum in; (*c*) after the gliding of the web of rocks on top of the autochtone is finished, posterior movements may take place, which cause the folding of both the autochtone and the web. In this case an accumulation of petroleum takes place under conditions similar to those of the normal anticlinal foldings, or of the diaperic foldings.

THE OIL TRADE OF GERMANY.

THREE MONTHS' STATISTICS.

The imports of petroleum products into Germany for January—March was as under:—

	1908. Tons.	1909. Tons.
Illuminating oil (refined)	366,114	334,876
Crude oil	9,596	5,941
Lubricating oil	55,779	47,277
Benzine (crude)	23,418	26,157
Refined mineral oil..	2,256	1,327
Residuals	184	62
Heavy benzine	56	949
Total	457,403	416,589

In general, the imports have diminished. The only product shewing an increase is benzine, this no doubt being due to the progress made in automobilism and aeronautics.

The imports from different countries are as follows:—

	1908.	1909.
I.—Kerosene—		
United States	312,874	267,186
Russia	14,257	14,258
Austria	33,322	52,778
Roumania	5,401	3,567
II.—Lubricating—		
United States	25,522	21,425
Russia	23,485	19,539
Austria	6,017	5,739
III.—Benzine—		
Dutch Indies	15,332	19,107
Roumania	6,063	2,202
Austria	1,210	2,160
Russia	632	807
IV.—Crude—		
United States	3,312	4,026
Austria	1,614	1,229
Dutch Indies	4,423	575

A Californian Well Breaks Loose.—A well drilled in the Santa Maria field of California, after having been closed down for several weeks, broke loose some days ago, creating quite a sensation. It is stated that this well—known as the Parker well—promises to be the largest ever known in the Californian fields.

THE SHELL TRANSPORT AND TRADING COMPANY, LIMITED.

DIRECTORS' REPORT.

A TWENTY PER CENT. DIVIDEND DECLARED.

The directors' report, which is to be presented at next Monday's annual meeting of the shareholders of the Shell Transport and Trading Co., Ltd., reads as follows:—

Including the balance brought forward from 1907, and £3,812 16s. 7d., being the unexpended balance of the sum of £70,000 appropriated for special purposes out of the profits of the year 1906, there is a credit to the profit and loss account of £710,551 17s. 10d.

Deducting management, legal and other expenses (£7,557 2s. 6d.), there remains £702,994 15s. 4d. to be carried to the balance sheet. From this amount, preference dividends (absorbing £50,000) and interim dividends (absorbing £230,000) have already been paid.

The representation of the company on the boards of the Anglo-Saxon Petroleum Co., Ltd., and the Bataafsche Petroleum Maatschappij remains unaltered. Depreciation on a sufficient scale having been provided by the Bataafsche Petroleum Maatschappij and the Anglo-Saxon Petroleum Co., Ltd., your directors do not deem it necessary to appropriate out of the year's profits any sum to reserve, which remains at £720,000 on reserve account, with £100,000 at the credit of reserve fund.

After payment of the dividends already distributed, there remains a balance of £422,994 15s. 4d. from which your directors recommend that a further and final dividend for the year 1908 of 10 per cent. be paid on the 5th proximo (making 20 per cent. for the year), leaving the sum of £192,994 15s. 4d. to be carried forward to the current year.

Reports received from the Anglo-Saxon Petroleum Co., Ltd., and the Bataafsche Petroleum Maatschappij justify the payment on account of this year of an interim dividend of 5 per cent. (*i.e.*, at the rate of 10 per cent. per annum), which will also be made on the 5th proximo.

In accordance with the practice inaugurated last year, summarised balance sheets of the Bataafsche Petroleum Maatschappij and of the Anglo-Saxon Petroleum Co., Ltd., are appended.

The retiring directors—Messrs. H. N. Benjamin, A. V. D. Best, W. H. Samuel, and Dr. A. J. Cohen Stuart—being eligible, offer themselves for re-election.

BATOUM TRADE STATISTICS FOR APRIL.

The following are the figures of import, export and storage for April, 1909 (o.s.) (in thousand poods):—

	Imported.	Exported.	Stocks on May 1, 1909
Illuminating oil—			
Light refined	822	2,103	4,696
Distillate	1	330	53
Heavy	66	—	124
Lubricating oil—			
Engine	443	477	1,216
Spindle	123	35	204
Cylinder	8	14	37
Vaseline	—	84	51
Lubricating distillate ..	2	—	7
Mazout..	425	153	513
Other products	30	—	8
Total	1,920	3,196	6,909

MISCELLANEA.

OIL REFINING IN BURMA.

On account of the rapid development of the oil industry in Burma, a company has recently been registered in Rangoon for the manufacture of sulphuric acid for local oil refining.

The new company is capitalised at $160,000, which has been largely over-subscribed by local investors, including oil companies. If the project is successful, various other products will be manufactured, such as vegetable dyes, fertilisers, and other articles, utilising the alkaline earth deposits of Burma.

At present sulphuric acid is high, as the charges for freight, insurance and packing add heavily to the cost price. It is now imported from Great Britain alone, last year's importation amounting to 2,080 short tons, valued at £24,000 or about £11 10s. per ton. The duty is 5 per cent. ad valorem, which with the cost of freight, insurance and packing of the imported article, is expected to afford ample protection for the local product. The new industry is attracting more than passing attention, as shewing a disposition among local capitalists to develop the manufacturing capabilities of that country.

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ANOTHER SITTING OF THE PETROLEUM COMMITTEE.

One of the principal witnesses before last Monday's sitting of the Departmental Committee on Petroleum, which met at the Home Office, was Mr. E. Chalk, goods manager of the London, Tilbury and Southend Railway, who stated that he considered the present railway methods as to carriage of petroleum spirit quite satisfactory, and that additional legislation on the subject is unnecessary. During 1908 his company carried from Thames Haven by tank waggons, nearly 25,000 tons nett weight of spirit and a gross weight of 2,265 tons in barrels, mainly steel barrels of an approved type, no fire or explosion of any kind having taken place in transit. He suggested that, in view of the danger by unbunged petroleum spirit empties, it should be made compulsory that all such empty packages be closed air-tight as soon as they are cleared of their liquid contents.

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TRIAL TRIP OF THE "CLEARFIELD."

On Monday last the new large oil tank steamer "Clearfield" built by the Tyne Iron Shipbuilding Co., Ltd., of Willington Quay-on-Tyne, was taken to sea for her trial trip. This vessel which is over 360 feet long by 48 feet 6 inches beam and 30 feet 6 inches moulded depth, has been constructed to the Bureau Veritas highest class for carrying oil in bulk.

The vessel will carry nearly 6,500 tons deadweight and has 28 seperate oil tight compartments, the whole of which were completely tested in nine working days. The oil installation consists of three specially designed oil pumps arranged to pump through a double line of oil piping. The accommodation of the vessel is very handsomely fitted up, the saloon being in polished wainscot oak and the charthouse and lobbies in polished mahogany.

The machinery which has been supplied by Messrs. The Wallsend Slipway and Engineering Co., Ltd., consists of engines 26 inches, 43 inches and 70 inches by 48-inch stroke with three single-ended boilers and on trial they enabled the vessel to attain a speed of over 11½ knots during a series of runs over the measured mile.

Immediately after the trial trip the vessel disembarked her passengers and then went straight on her voyage to New York.

During construction the vessel and machinery have been under the superintendence of Mr. John Muir, Messrs. Hunting and Son's superintendent.

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AMERICAN OIL MEN RUSH TO MEXICO.

As time goes on, the interest in the development of the Mexican petroleum fields becomes more apparent. Land values are soaring up, and American oil men are rushing to the scene and striving one against another to secure territory. The Texas Co., one of the largest independent oil producers and refiners in the Texas fields, has acquired extensive oil lands in Mexico, which it is to develop without delay. The J. M. Guffey Petroleum Co., another large independent oil producer, has also entered the fields, while the Mexican Petroleum Co., which is reported to have at the present time the largest developed oil property in Mexico, is also an American concern.

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PRODUCTION OF ENGLISH COMPANIES IN RUSSIA.

Baku Russian Petroleum Co., Ltd.—The production for the week ended 5th June was 189,000 poods, or 3,047 tons (exclusive of the production from properties recently let on lease); and for the week ended 12th June was 195,650 poods, or 3,154 tons.

Russian Petroleum and Liquid Fuel Co., Ltd.—The production for the week ended 5th June was 203,000 poods, or 3,273 tons; and for the week ended 12th June was 188,000 poods, or 3,031 tons.

Spies Petroleum Co., Ltd.—The production for the week ended 6th June was 235,845 poods, or about 3,804 tons. The total production for year to 6th June was 5,282,745 poods, or about 85,206 tons. The total production for the corresponding period last year was 5,219,465 poods, or about 84,185 tons. The output for the week ended 13th June was 215,670 poods, or 3,479 tons. The total production for year to 13th June was 5,498,415 poods, or about 88,684 tons. The total production for the corresponding period last year was 5,446,325 poods, or about 87,844 tons.

The European Petroleum Co., Ltd.—The production for the week ended 6th June was 139,876 poods, or 2,255 tons; and for the week ended 13th June was 141,076 poods, or 2,274 tons.

GRADUAL EXHAUSTION OF THE BAKU OIL FIELDS.

In a previous issue we stated that the production in the oil fields at Baku for 1908 was half-a-million tons less than that of 1907. We now find statistical information in *Industry and Trade* clearly demonstrating the exhaustion of the Baku oil fields. The following figures shew the decrease in the production for 1908 and 1907, in comparison with those of 1904 :—

District.	Production in Million Poods. 1908.	1907.	1904.	In 1908 More or Less in per cent. than in 1907.	1904.
Balakhany ..	69·4	71·3	82 0	- 2 6	-15·4
Saboontchi ..	198·6	184·0	218·1	+ 7·3	- 8·9
Ramany ..	78·4	89 6	133·5	-12·5	-41·2
Bebe-Aibat ..	119·5	131 3	181·1	- 8·9	-34·0
Total ..	466·4	476·2	614·7	- 2·0	-24·0

In comparison with 1904, last year shews a very important decrease, especially in the Ramany and Bebe-Aibat districts.

This diminution in the production of the Baku petroliferous areas is a direct consequence of the exhaustion of the strata on the one part, and of the decreased activity of the exploitation of the fields on the other part.

Respecting the exhaustion of the area a clear idea can be formed from the figures shewing the productivity of spouters for the last seven years—1902 to 1908. The quantity of oil produced by spouters in per cent. of the total production was : —

Districts.	1902.	1903.	1904.	1905.	1906.	1907.	1908.
Saboontchi ..	3·7	1·3	2·5	1·4	1·2	2·1	2
Ramany	27·5	6·9	6·3	10·3	9·1	3·4	2
Bebe-Aibat ..	35·4	23 7	12·4	2·1	.0·2	4·0	2
The whole area..	14·9	8·9	5·8	3·3	2·4	2·5	2·1

The decrease in the production of spouter oil is thus steady and regular from year to year. The same result is also seen by studying the daily production in all the wells · —

District.	1905.	1906.	1907.	1908.	Less than in 1905, in per cent.
Balakhany ..	368	348	304	286	-22·3
Saboontchi ..	1,005	900	839	803	-20·1
Ramany	1,878	1,739	1,388	1,162	-38·1
Bebe-Aibat ..	2,627	2,167	1,873	1,605	-38·1
The whole area ..	1,050	920	799	732	-31 3

The decrease in the productivity is shewn equally by the old wells as well as by the new ones. For the whole of the four districts it is as follows :—

	1905.	1906.	1907.	1908.
Old wells	995	865	752	698
New wells	2,197	1,918	1,579	1,556

The decrease in the productivity is still more pronounced, if we consider the new wells alone. Thus in the Ramany district the new wells in 1905 were yielding 3,775 poods, while in 1908 they only yielded 1,552 poods; and in Bebe-Aibat the figures were 3,911 poods in 1905 and 1,732 poods per well in 1908.

As regards the development of boring, the following table shews that both boring of new wells and the deepening and cleaning out of old ones, were considerably less in 1908 than in 1907 in all districts with the only exception of Saboontchi, so that the average monthly number of bored sagenes decreased by 20 per cent. and more :—

Districts.	Average monthly number of bored sagenes.					Average monthly number of wells where boring has only begun.			Average monthly number of wells where boring has terminated.		
	Total of sagenes.			More or less in 1908 than in							
	1908.	1907.	1904.	1907. Per Cent.	1904. Per Cent.	1908.	1907.	1904.	1908.	1907.	1904.
Balakhany..	664	695	830	- 4·5	—20 1	5	4	6	3	4	4
Saboontchi	2,207	2,096	1,882	+ 5·3	+17·3	10	10	10	9	8	9
Ramany	775	790	986	—19·1	—21·4	2	3	5	3	3	5
Bebe-Aibat	1,086	1,499	1,501	—27·5	—27·7	2	3	5	4	3	4

With the decrease in the production of crude oil, naturally goes the decrease of work in the refineries, as can be seen from the following table :—

Products.	Million Poods.			More or Less in 1908 than in (In p r cent.)	
Distilled over	1908.	1907.	1904.	1907.	1904.
Illuminating oil distillate ..	95·9	93·1	159·9	+ 2·9	- 40·0
Lubricating oil distillate ..	17·0	25·3	20·6	- 32·8	- 11·6
Residuals ..	182·4	199·9	302·3	- 8·8	- 39·7
Benzine ..	0·3	0·5	0·5	- 40·0	— 40·0
Other products	24·7	36·1	30·9	- 31·6	— 20 1
Total ..	320·3	354·9	514·3	— 9·7	— 37·7
Refined—					
Illuminating oil	77·9	88·2	141·7	— 11·6	— 45·0
Lubricating oil	13·4	13·2	14·0	— 0·1	— 4·3
Benzine	0·5	0·5	0·3	—	+ 40·0
Total ..	91·8	101·9	156·0	— 10 0	— 41·2

Owing to the enormous development in the consumption of liquid fuel and to the decrease in production, refining of crude oil has diminished and the export of crude oil largely increased, which can be seen from the following table of exports from Baku in 1908, in comparison with 1907 and 1904 :—

	Million Poods. 1908.	1907.	1904.	In 1908 more or less in per cent. than in 1907.	1904.
Total export by the Transcaucasian Railway	62·6	55·3	104·9	+11·7	—40·3
Total export by the Vladicaucasian Railway	7·3	6·1	4·1	+16·4	+43·8
Total export by the Caspian Sea	289·5	313·5	380·5	-- 7·7	--23·9
Total export in all directions	361·4	377·3	492·6	— 4·2	—26·6
Including—					
Residuals	215·7	234·8	302·6	— 8·1	--28·7
Crude oil	44·9	35·4	18·9	+21·2	+57·9

The decrease of the exports on the Volga means that the central Russian districts have been less provided with petroleum products, while the increase of the exports on the Transcaucasian and Vladicaucasian railways demonstrates the increase (in comparison with 1907) of the export abroad; but this latter, if compared with the same export in 1904 shews a very considerable decrease. The figures are :—

	1908.	1907.	1904.	More or Less in per cent. in 1908 than in 1907.	1904.
Various products ..	37·8	34·0	75·5	+ 10·1	— 49·7
including					
Illuminating oil ..	27·2	24·9	61·6	+ 8·5	— 55·8
Lubricating oil ..	8·6	7·2	12·5	+ 16·3	— 31·2

As can be seen from the above statistical figures, the state of the Russian oil industry was far from flourishing during 1908. No improvement can be expected in the current year. Judging to all appearances the quantity of oil to be produced this year will still be less than that produced in 1908.

THE SPIES PETROLEUM COMPANY, LIMITED.

ANNUAL MEETING OF SHAREHOLDERS.

A DIVIDEND OF 12½ PER CENT.

The annual meeting of the shareholders of the Spies Petroleum Co., Ltd., was held on Thursday at the London Chamber of Commerce, E.C., the chairman of the company—Mr. J. Annan Bryce, M.P.—presiding.

The Secretary—Mr. H. G. Trew—read the notice convening the meeting, as well as the report of the auditors, after which the report of the directors was taken as read. It was as under:—

The net production of crude oil for the year 1908, after deducting leakage and water, amounted to 11,490,754 poods. The stock on hand at the 1st/14th January, 1908, was 161,282 poods, which with the net production during the year of 11,490,754 poods, made a total of 11,652,036 poods. Of this quantity there were sold and delivered 10,000,002 poods, used for fuel 1,530,950 poods, paid as royalty in kind 9,782 poods, thus leaving in stock on 31st December, 1908 (o.s.) 111,302 poods.

The above figure of net production shews an increase over that of the preceding year of 4,711,006 poods, or nearly 70 per cent., mainly due to the fountain in well No. 5 on the Baskakoff plot. The crude oil sold and delivered, as above, realised 2,009,518·68 roubles, an average selling price of 20·095 copecs per pood.

After charging to revenue the cost of deepening (£19,321 15s. 11d.) and the maintenance of buildings, machinery and plant the results are as follows:—The net profit for the year ending 31st December, 1908 (o.s.), was £90,045 4s. 2d., and after adding the net balance brought forward of £921 12s. there remains a balance to the credit of profit and loss account as at the 1st January, 1909 (o.s.), of £90,966 16s. 2d. After placing to depreciation of buildings, plant, etc., £34,000, there remains an available balance of £56,966 16s. 2d.; out of which your directors recommend the payment of a dividend at the rate of 12½ per cent. per annum, absorbing £48,437 10s., and the carrying forward of the sum of £8,529 6s. 2d. Out of which Russian taxes and directors' additional remuneration under article 88 have to be provided. As already advised in the interim circular of 10th December last, thirteen additional plots of oil-bearing land, amounting in all to 127 dessatines, were acquired in the autumn of 1908, against the payment of 65,000 fully-paid shares in the company. These plots are favourably situated, and continue the line of the company's old Stupin plot, which has given a steady and progressive production for the past nine years. In two neighbouring plots good wells have been struck. Your holding of oil-bearing land now amounts to about 286 dessatines (772 acres), which for Russia is a very extensive area, and should ensure a large supply of oil for many years to come.

During the past year a large amount of development work was done, particularly upon the Baskakoff plot, the total depth drilled for the year on all the properties having been 16,075 feet. Results from this work may be expected during the present year.

The work of development is being actively continued upon plots 13, 28, 40, 88 and 91, and drilling has been started upon some of the plots acquired last year.

Well No. 1 upon Kusmin plot No. 13 has recently been drilled to oil, and is already giving a satisfactory production.

The deepening of various wells upon the old plots Mistouloff No. 19, Samcovi No. 163 and Goloubinsky No. 24 has also been taken in hand in view of recent favourable results in the neighbourhood, and a good production has already been obtained in well No. 2 Mistouloff, whilst well No. 3 Samcovi is giving indications of the existence of good supplies of oil near its present depth. For the past month this well has spouted from time to time, but has on each occasion corked with sand after spouting. It is hoped that a good production will be derived from this well, as also from well No. 4 now in course of deepening. The indications are such as to encourage the belief that there exist in these properties supplies which have not hitherto been tapped.

The total production from all the plots from 1st/14th January, 1909, to 24th May/6th June, 1909, amounted to 5,282,745 poods, as compared with a total of 5,219,465 poods for the corresponding period last year. The increase of production in 1908 was, as already mentioned, mainly due to the fountain in well No. 5 Baskakoff. In 1909 there has been no overflow of importance, but owing to the large baling production the output has exceeded even the high level of 1908.

The question of using natural gas for fuel instead of crude oil has continued to engage the attention of the board, and they are pleased to be able to report that in the current year the boilers on the Stupin plot have been fed almost entirely with gas. In certain other plots also there exists a good supply of gas. The equipment of these with apparatus for its use will shortly be completed. As last year the consumption of oil fuel on the properties amounted to 1,500,000 poods, the substitution of gas is a matter of considerable importance.

The price of oil at Baku, which regulates the amount received by this company for its production, continues at a satisfactory level, being now about 22¾ copecs, and while fluctuations must be expected from time to time, your directors do not at present see any indication of a decline in price.

Shareholders will remember that in the interim circular of 10th December, 1908, it was stated that the issue of new shares for the replacement of capital was under the consideration of the board.

The directors consider that the time has now come to make an issue for the purpose not only of replacing capital but of furnishing further funds for more rapid development of the now extensive properties of the company. They have accordingly arranged with a group represented by Messrs. Ofenheim and Co. in consideration of 1s. per share underwriting, to guarantee an issue of 155,000 shares to be offered to shareholders at the price of 11s The issue will be made shortly after the general meeting.

The board has appointed Mr. M. A. Maresch to a seat on the board, and has also appointed him to be managing director.

Mr. Maresch's appointment as director will be submitted to the shareholders for confirmation at the general meeting.

Mr. J. Annan Bryce and Mr. W. Gleboff retire from the board by rotation, and being eligible, offer themselves for re-election.

In moving the adoption of the report, the Chairman said the shareholders would be familiar with the principles on which the accounts were made up, and as the board had endeavoured to make them self-explanatory, he need not discuss them in detail. There were, however, one or two points to which allusion should be made. If they would look at the balance sheet they would see that the authorised capital stood at 1,000,000 shares or £500,000, instead of 775,000 shares or £387,500 as in the last balance sheet. That was owing to the authority to increase the capital given at the last general meeting. The figure of issued capital was also increased, and stood at 775,000 shares or £387,500, as against 710,000 shares or £355,000 as in the last balance sheet. That increase was due to the issue of 65,000 shares or £32,000, which were issued as fully paid, against the purchase of 13 additional plots of oil-bearing land at Grosny, alluded to in the interim circular of 10th December last, and described in the report under consideration. In his speech last year he said that it was intended to issue those shares to adjust the excess of capital expenditure, but the opportunity of acquiring the 13 plots referred to having presented itself, the directors decided to avail themselves of it, and the issue of those 65,000 shares to the vendors offered the most convenient method of payment. On the other side of the balance sheet, they would see that the capital account had risen from £403,000 to £461,000, the increase of £58,000 being made up of the value of the above-mentioned 65,000 shares and sundry other small capital items, plus the capital expenditure during the year on building, plant, etc., £42,000, less the amount appropriated last year for depreciation, £18,800. The expenditure of buildings, plant, etc., which included expenditure on drilling and deepening, was naturally heavy, considering the large amount of development work which had been done, but it was a few hundred pounds less than in the year 1907. They would observe from the profit and loss account that the profit was £90,966 16s. 2d. as against £32,184 last year, or nearly three times as great. The directors had thought it wise, in view of the heavy expenditure in progress on development work, to appropriate £34,000 to depreciation account, in addition to the amount of £19,321 15s. 11d. written off against deepening, directly to profit and loss account, making a total amortisation of £53,321 15s. 11d. They had done that in pursuance of the conservative policy which they had all along followed, and which had enabled the company to reach its present sound position. The cost of production notwithstanding the large administration expenditure, due to the increased area, shewed the satisfactory reduction of three copecs per pood, being

10·6 copecs, including expenses everywhere, as against 13·6 copecs last year. That reduction was, of course, entirely owing to the increased production. He had described to the shareholders in previous years the policy of the directors as regarded the acquisition of new lands. That policy was pursued for some years on the principle of paying for new purchases of land out of revenue, the only method possible while the shares were under par. They acquired in that way 119 dessatines at a cost of £80,000. In addition they had acquired by the issue of 90,000 shares at par 137 dessatines at a cost of £45,000. The company at the present time, therefore, possessed, as stated in the report, 286 dessatines or 772 acres of oil-bearing land, in addition to 25 dessatines used for storage purposes, held on leasehold. The original properties amounted to 30 dessatines or 81 acres, so that 256 dessatines or 691 acres had been acquired since the formation of the company. The storage of the company consisted of six large iron tanks capable of holding 1,200,000 poods. Those tanks had proved of great value to the company by enabling it to carry large stocks at times when there were difficulties of sale or delivery. They would see from what he had said in what a favourable position the company now was as regarded producing capacity. It was true that the production from two of the original plots, Nos. 15 and 16 was now much diminished, but from the fact that wells on the adjoining plots, Nos. 163 and 19 gave indication of good supplies in strata not hitherto touched, it was possible that those old plots, Nos. 15 and 16, might renew their youth. The third original plot, No. 32, had given a steady production from the beginning, having produced in 1908 2,310,000 poods, as against 2,290,000 poods in 1907. It might be anticipated that large and steady supplies would be given by the new plots, 15 in all, which had been acquired in the neighbourhood of this old plot. On two of those, Nos. 88 and 91 a satisfactory production had already been obtained. Plot No. 40, Baskakoff, had, as they knew, proved a great success. It gave in 1906, mainly in fountain production, 6,893,000 poods. During this year it had not given any fountain, but had already produced by baling about 3,500,000 poods. That plot had already covered cost of purchase and development, namely, £50,000, nearly three times over. With regard to the four plots recently acquired at the eastern end of the field, there was reason to hope for good results as development progressed. Large supplies had in the past been given by adjoining plots, and one of their wells on plot 13 was now giving a fair production. It was, as stated in the report, a very satisfactory feature of the current year's production generally, that though there had been no fountains, the productiion was already in excess of that of 1908 to date. Of the production from 14th January to 13th June, 1908, 5,446,000 poods, no less than 2,500,000 poods consisted of fountain oil, while the whole of the 5,498,000 poods produced from 14th January to 13th June, 1909, had been given by baling. There was, therefore, every reason to expect that, even if they had no fountain this year, the production of 1909 may, barring unforeseen accidents, exceed that of last year. On the whole he considered the shareholders had every reason to be satisfied with the position of the company. It was in a sound position now and in view of its large area of undeveloped territory, there was every reason to expect for it a long life. Of course a continuance of prosperity would depend on the level of prices, but considering the continually shrinking supplies from Baku, there was no reason to anticipate any serious fall in the value of oil. As to the issue of fresh capital, at the last general meeting he had pointed out the necessity of replacing the excess of capital expenditure due to the policy of paying for new properties out of revenue, and he there indicated that it was proposed to accomplish that replacement by the issue of the 65,000 shares of authorised capital at that time still unissued. As he had stated, those 65,000 shares were no longer available for the purpose, having been already used in payment for the thirteen plots acquired in the autumn of last year. In addition, however, to the replacement of capital, the acquisition of the thirteen plots rendered it necessary to provide further capital for development, and it was accordingly decided by the board that an issue should be made of 155,000 shares, which number made possible a pro rata allotment to shareholders. Those shares would form part of the increased capital of 225,000 shares authorised at the last general meeting, and after the issue had been made there would still remain unissued 70,000 shares. As mentioned in the report, an arrangement had been made under which the issue of these 155,000 at 11s. was guaranteed for a commission of 1s. per share. so that the company would receive the par value. It was proposed to make the issue within the next few weeks. He then concluded by moving "That the report of the directors produced, together with the statement of the company's accounts as at 13th January, 1909, new style (31st December, 1908, old style) duly audited be now received, approved and adopted."

Mr. G. Grinnell-Milne seconded the motion, adding that like the rest of his colleagues, he believed they had entered on a satisfactory condition of affairs.

The motion was then put and unanimously agreed to.

The Chairman next moved: "That a dividend at the rate of 12½ per cent., free of income tax, be now declared for the year ended January 13th, 1909, upon the 775,000 issued shares of the company, such dividend to be paid forthwith to the shareholders registered on June 17th, 1909," and this being seconded by Mr. Charles J. Palmer, was likewise agreed to.

The Chairman proposed that the appointment of Mr. M. A. Maresch as a director of the company should be confirmed. He remarked that shareholders must all be aware of the services that Mr. Maresch had performed for the company. He had been in its employment from the beginning, and it was very largely owing to Mr. Maresch's ability, energy and constant attention that the company had reached its present position He was sure, therefore, that they would all be glad that Mr. Maresch should become the managing director of the company.

Mr. Grinnell-Milne seconded the motion, which was carried unanimously, Mr Maresch briefly replying.

Mr. Ofenheim moved the re-election of the retiring directors, Messrs. J, Annan Bryce, M.P., and W. Gleboff, and this was carried with acclamation.

A hearty vote of thanks to the officers and staff of the company was moved by the Chairman, seconded by Mr Ofenheim, and carried unanimously, and the proceedings closed.

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BATOUM PETROLEUM SHIPMENTS.

The following were the shipments of petroleum products from Batoum during the week ended May 23rd o.s. (in thousand poods):—

	Illuminating Oil.		Residuals.		O. Products.	
	1908.	1909.	1908.	1909.	1908.	1909.
To Europe ..	455	448	—	76	250	384
To the East ..	133	7	—	—	—	2
To Russian Ports.	—	1	—	—	—	8
From 1st Jan. to 23rd May:—						
To Europe ..	4,987	10,855	726	1,731	3,855	4,426
To the East ..	5,538	1,213	—	1	29	200
To Russian Ports.	1,504	1,208	—	—	33	62

BALANCE SHEET OF THE ANGLO-SAXON PETROLEUM COMPANY, LIMITED.

The following is a summary of the balance sheet of the Anglo-Saxon Petroleum Co., Ltd., at the end of last year:—

LIABILITIES.

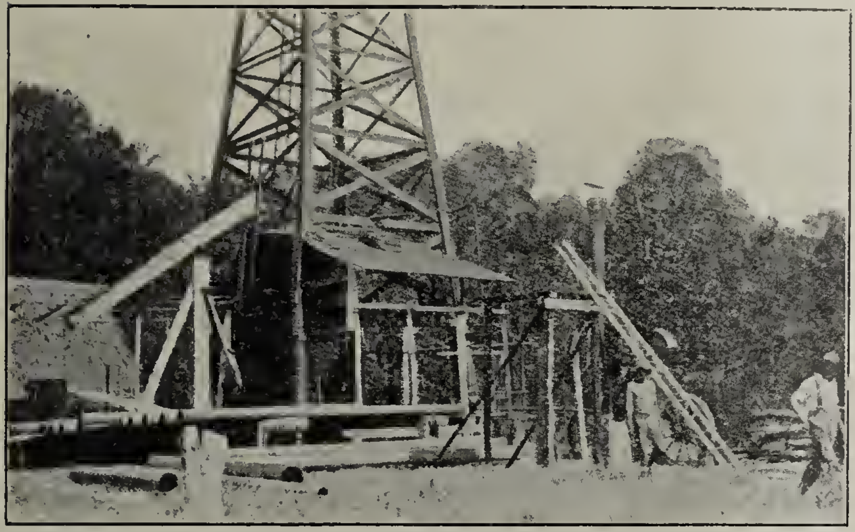
	£	s.	d.
Capital	4,000,000	0	0
Sundry Creditors	653,936	9	10
Pension Fund, etc.	20,683	10	7
Dividend, 1908	400,000	0	0
Carried Forward	36,035	15	6
	£5,110,655	15	11

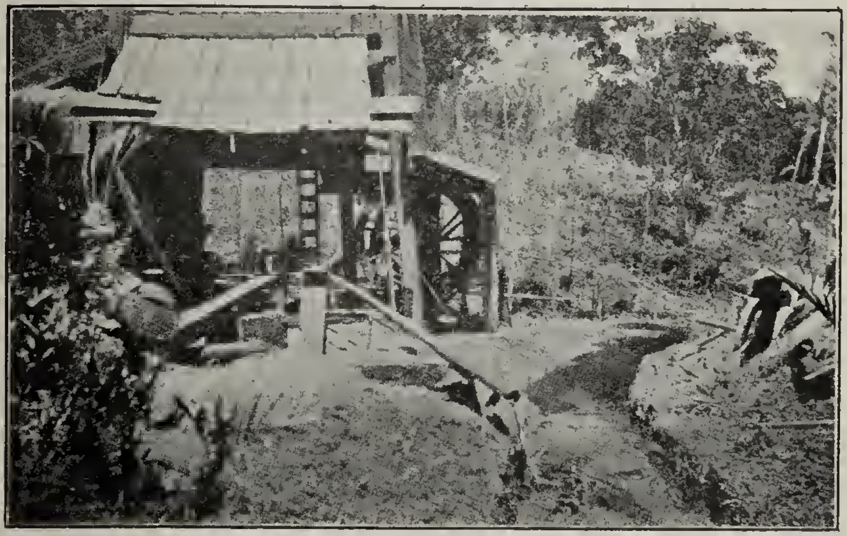
ASSETS.

	£	s.	d.
Properties	4,049,475	14	0
Lease of Office and Office Furniture	9,350	4	7
Steamers under construction	64,330	7	1
Installations ,, ,, ...	11,950	5	0
Materials ashore and afloat	21,814	3	5
Sundry Debtors	532,030	12	11
Sundry Balances	444	16	1
Cash in hand, at Bankers, and on Deposit ..	221,259	12	10
Interim Dividend for 1908	200,000	0	0
	£5,110,655	15	11

RECENT DEVELOPMENTS IN REGARD TO TRINIDAD.

Mr. A. Beeby Thompson (of the firm of Messrs. Thompson and Hunter), who has recently returned from a visit to Trinidad, speaks with enthusiasm of the prospects of the petroleum industry in that colony. In a chat with a representative of the Review a day or two ago, Mr. Thompson pointed out that Trinidad had now passed the experimental stage in regard to the possibilities of oil production upon a commercial basis, and active developments on a large scale were the objects of schemes now on foot. The Trinidad Petroleum Co., whose operations are centred at Guapo, have struck oil in all their recent wells in considerable quantities, and great quantities of gas accompany the oil. Some of the wells have flowed periodically, the oil gushing to a height of over 100 feet. One feature of great importance is the absence of water in the oil-bearing strata. The petroleum of the Guapo district, as readers of the Review will possibly recollect, is of excellent quality, yielding on distillation a large percentage of illuminating oils. The early difficulties of drilling, which much delayed the prospecting operations, have now been entirely overcome by a combination form of rig designed to suit the local conditions, and wells can now be drilled at a much quicker rate than formerly. In the vicinity of the Pitch Lake at La Brea, six miles from the Guapo oil fields of the Trinidad Petroleum Co., several highly productive wells have been completed by the New Trinidad Lake Asphalt Co., and here also preparations are in progress for an increased scale of development. One well in April and May flowed continuously for about three weeks, and yielded nearly 30 tons daily, of a heavy asphaltic oil, specially suitable for fuel purposes. Both the Trinidad Petroleum Co. and the New Trinidad Lake Asphalt Co. are using oil fuel in their boilers, and already arrangements are under consideration for supplying the electric power station in Port of Spain and other works with liquid fuel. The operated properties adjoin the coast and occur in the Gulf of Paria, where shipping is always protected, so that exceptional facilities exist for the cheap shipment of oils for export. There is no important oil field in the world so favourably located for the cheap disposal of the produced products to the markets of the world. The illustrations, which we herewith reproduce, are from photographs taken by Mr. Beeby Thompson during his recent visit, and to him we are indebted for permission to reproduce them. Well No. 4 of the Trinidad Petroleum Co. (seen in the first illustration) yields 20 tons of oil daily, while that of the New Trinidad Lake Asphalt Co. (in the second picture) has been flowing for three weeks, at the rate of 20 to 30 tons a day.





THE TEXAS COMPANY,

Transporters, Refiners and Distributors of Petroleum and its Products.

CRUDE BENZINE & DEODORISED BENZINE.

FUEL OIL AND GAS OIL

A Specialty.

LUBRICATING OILS.

HIGHEST GRADES. ❧ ***UNIFORM QUALITY.***

"TEXACO" BITUMEN.

Over 99 % Pure Bitumen.

THE ASSAM OIL COMPANY, LIMITED.

ANNUAL MEETING OF SHAREHOLDERS.

The annual meeting of the shareholders of the Assam Oil Co., Ltd., was held on Wednesday, at Winchester House, London, E.C., Lord Ribblesdale, chairman of the company, presiding.

The report of the directors, previously circulated to the shareholders, stated that the position at the refinery had continued to be satisfactory during the year. At the last meeting it was mentioned that, owing to causes explained, the company was then experiencing a decrease in its crude production. That was, however, put right in the later months of the year, and 1908 actually ended up with a slight increase over 1907. For the present year the figures were quite satisfactory, shewing a good advance on any previous year. Good progress was being made with development work.

The accounts shewed a profit of £25,912 2s., which, with the amount brought forward from last year, made a total sum of £46,100 10s. 6d. to be dealt with. The financial position of the company had continued to improve since the date of the last report, and the directors thought that they could safely recommend the payment of a dividend. They therefore proposed that £15,000 be transferred to depreciation account; and that a dividend of one shilling per share (less income tax) be paid, which would absorb £15,500; leaving £15,600 10s. 6d. to be carried forward.

Lord Ribblesdale and Mr. Hubert S. Ashton are the directors retiring by rotation, and, being eligible, they offer themselves for re-election.

The Chairman, in moving the adoption of the report and statement of accounts, said that the result of the working for the past year had been, on the whole, satisfactory; the profits were practically the same as those they were able to shew last year. Those profits amounted to £25,912, or £413 less than in 1907. That was not due to the fact that there had been a great fall in prices, but to their having sold a little less of their products than they did before. At the last meeting he told the shareholders that the quantity of oil produced during the first half of 1908 was less than for the corresponding period of 1907. He was, however, glad to say that the whole of that deficiency in crude oil was made up, and the year actually ended a little ahead of its predecessor in the production of crude oil. They had been able to write off £15,000 for depreciation, which made a total amount written off of £70,000, and the directors considered that quite adequate, in view of all the circumstances. As regarded the drillery a great deal of work had been done. First of all, they had linked up Bappapoong with Digboi by a siding, which enabled the crude oil from the wells there to be brought into the refinery, and also allowed drilling to be prosecuted much more rapidly and much more efficiently. That was a very great development, as the field would no doubt prove to be a most important piece of the company's property. Drilling had been satisfactory during the year, and two of the new wells should soon be reaching the oil. The markets during 1908 were steady, and their products went into consumption at all-round good prices. The only exception was in the case of wax, some of the year's production having to be marketed at lower rates than they had previously obtained. It was interesting to note what Mr. Cargill told his shareholders at the meeting of the Burmah Oil Co., which was held on May 7 last. He said: "As regards prospects for the present year, these are on the whole favourable at the moment, though profits will be affected by the considerable drop in the price of wax and candles and the heavy fall in the price of kerosene in India during the months of March and April. Fortunately, towards the end of the latter month there was a substantial recovery in the price of kerosene, and it is to be hoped there will be no recurrence of the war of rates." Naturally, what was good for the Burmah Oil Co. was also good for them, though he thought they were getting into a position which ought to tend to mitigate anything like a war of rates. There certainly seemed to be nothing in the outlook which should cause them any anxiety; for it was an outlook which, speaking as their chairman, he was very well satisfied with. Of the available balance of £46,100 they were writing off £15,000, and we recommend a dividend of 5 per cent., which left them with £15,600 to be carried forward. The position of the company, was, he thought, very sound, and unless markets during the year were very bad he did not see any reason why a steady rate of dividend should not be maintained. They had a large labour community out there, both white and native, amounting in round figures to about 2,000, and they did what they could to make that labour as comfortable, as well as efficient as possible. He thought a good standard of comfort means efficiency, and he was glad to say that the standard of comfort out there had improved greatly. It had not been a good year for the health of their white employés; but the health of the native population had been very good during the year under review. In conclusion, he moved the adoption of the report and balance sheet.

Surgeon-General Sir A. C. C. de Renzy, K.C.B., seconded the resolution.

Mr. T. Carritt suggested that instead of expending so much money out of revenue on development a further issue of capital might be made and the revenue divided amongst the shareholders.

Mr. P. Warnford Davis hoped that the board would never depart from their present conservative policy of paying for development out of profits.

The Chairman, in reply, said that with the sanction of the shareholders the board proposed to continue their present policy of development, at any rate for a time

The report was unanimously adopted, and on the motion of the Chairman, seconded by Mr. Agnew, a dividend of 1s. per share, less income-tax, was declared.

BALANCE SHEET OF THE BATAAFSCHE PETROLEUM MAATSCHAPPIJ.

The following summarised balance sheet of the Bataafsche Petroleum Maatschappij, which was sent out together with the annual report and balance sheet of the Shell Transport and Trading Company, Limited, will be of interest to our readers. It should be mentioned that the Dutch florins are taken as being equal to 1s. 8d. English money=12 to the £1.

LIABILITIES.

	Fl.
Share Capital	80,000,000·00
Creditors	6,857,812·15
Advances on Consigned Products	5,846,848·30
Insurance Fund	3,398,835·02
Provision for Local Charges, Taxes and Bonuses to Staff	2,381,018·49
Depreciation Account, 1907 and 1908	9,442,650·24
Dividend	14,000,000·00
Carried forward	547,829·07
	Fl. 122,484,993·27

ASSETS.

	Fl.
Properties and Rights .. :	75,212,240·00
Shares in the Geconsolideerde Hollandsche Petroleum Co.	1,315,743·94
Shares in the Nederlandsche Indische Tank Stoomboot Maatschappij	1,584,625 75
Dutch Government Bonds	75,416 25
Office Furniture	2,015·01
Cash in hand and at Bankers	1,011,909·19
Debtors..	15,669,688·38
Materials ashore and afloat..	906,633 29
Installations taken over from the Anglo-Saxon Petroleum Co., Ltd.	388,261·29
Extensions of Installations, etc.	1,410,309·24
Lighters and Ships in course of construction ..	772,565·60
Products in Stock	9,580,920·37
Materials, Extensions and Debtors of Dutch Indian Administration	14,554,664·96
	Fl. 122,484,993·27

RUSSIAN NOTES.

At Aliati, on the Transcaspian railway, petroleum was discovered a short time ago, and this has now commenced to appear on the surface in large quantities.

Encouraging Indications.—Engineer T. Dadiani has made an inspection of the petroleum fields in the village of Bagdadi, in the Kutais district. He has found encouraging indications of very rich deposits.

State Exploitation.—The Mining Committee of the Ministry of Commerce and Industry is in favour of the exploration of private petroleum properties at the expense of the State. In the first instance the Committee recommend the exploration of the Maikop petroleum deposits.

The Bebe-Aibat Petroleum Company.—The yearly general meeting of the shareholders of the Bebe-Aibat Petroleum Co. took place at Moscow. The report shewed a deficit of 8,424 roubles (capital, 2,400,000 roubles), which is fairly satisfactory, considering that the deficit for the preceding year was 947,093 roubles.

A Gas Spouter in Surakhany.—On the 12th May (o.s.), on a plot belonging to Mirzoeff Bros., a large gas spouter broke out from a depth of 215 sagenes. The spouter at first threw out a large quantity of white sand which soon covered the surroundings with snow-white dust.

Messrs. Nobel Bros. at Kokand.—The firm, Nobel Bros., are intending to purchase the petroleum properties in the Kokand district, belonging to the Bitum Co. and the Turkestan Petroleum Co. Engineer A. N. Kovalevski is now in St. Petersburg on behalf of the two named companies, to arrange the details with Nobel Bros.

Cheaper Rates Needed.—Messrs. Nobel Bros. have addressed to the administration of the East China railway the demand of lowering the railway rates on the Vladivostock—Kharbin railway for kerosene exported by way of Batoum or Vladivostock. The reason for the demand is the fear of the competition of American kerosene which can be successfully imported into those markets by way of the South Manchurian railways through Dairen.

ROUMANIAN NOTES.

The Credit Petrolifer.—Engineer Zanne has been nominated member of the administration council of the above company, in place of Mr. Al. Cottesco.

Competition Lowers Prices.—The prices of products on the home market are very low, in consequence of the sharp competition existing now for each kind of product. The price for residuals till now maintained high is now on the decrease owing to the termination on 1st May of the agreement between the refiners.

The Aquila Franco-Romana.—A general meeting of the shareholders of this company took place a few days ago. The profits realised in the year 1908-9 have allowed the distribution of 5 per cent. dividend on the capital of 6,000,000 francs. The company shortly intend to largely extend their exploitation, in view of utilizing the full capacity of their refinery.

Increasing Production.—The increase in the general production is mostly owing to the increase in the rich wells of the Steaua Romana at Campina, to the large increase in the Tzintea, to the new well at Mislishora de Jos belonging to Seceleanu Bros., and to the great production at Moreni, where the Astra and Romano-Americana have struck very rich oil in their two wells.

Prices and Production.—The prices for crude continue to be firm. The general production shews a notable increase and according to preliminary information it will be for the month of May about 115,000 to 120,000 tons. If this figure of production is maintained next month, the Roumanian industry will take another swing forward, as this increase will stimulate new exploration work and attract new capital to the industry.

A Mining Council has been established as a department of the Ministry of Commerce and Industry. The members nominated by the Ministry are:—Mr. C. Alimanestianu, Prof. Mrazec, the engineers, Valerin Puscarin and T. Tanasesco and Mr. Oscar Niculesco, member of the Court of Cassation. The Association of the Petroleum Producers have been granted the right to elect one of their members to take part in the Council. Mr. Charles Perutz, general director of the Steaua Romana, has been elected by the Association.

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LATEST QUOTATIONS OF PETROLEUM SHARES.

ENGLISH COMPANIES.

This list is restricted to companies who have paid dividends or who are producers.

Company.	Capital Paid Up.	Value of Shares.	Latest Prices.
Assam Oil	£310,000	£1	17/6-18/6
Baku Russian Petroleum ..	£750,000 Ord.	£1	0/1½-0/7½
,, ,, ..	£650,000 5½% Pref.	£1	0/3-0/9
Bibi-Eybat Petroleum Co. ..	£380,000	£1	5/0-6/0
Californian Oilfields	£400,000	£1	$5\frac{3}{16}$-$5\frac{5}{16}$
Commonwealth Oil Co. ..	£500,000 Pref.	£1	½-⅝
,, ,, ..	£225,000 Def.	£1	½-⅝
Lobitos Oilfields, Ltd. (£1) ..	£360,000	£1	24/6-25/6
Pacific Oilfields, Ltd. (£1) ..	£200,000	£1	24/0-25/0
Russian Pet. & Liquid Fuel ..	£500,000 6½% Pref.	£1	2/0-3/0
,, ,, ...	£600,000 Ord.	£1	2/0-3/0
Schibaieff Petroleum ..	£575,000 6% Pref.	£5	5/0-6/0
,, ,, ...	£575,000 Ord.	£1	0/9-1/3
Shell Transport & Trading ..	£2,300,000	£1	64/0-65/0
,, ,, ,, ..	£1,000,000 Pref.	£10	10⅞-11⅛
Spies Petroleum Company ..	£387,500	10s.	12/1½ /7½

RUSSIAN COMPANIES.

Company.	Nom. Value in Roubles	Quotations on June 15th.	
		Lowest Roubles	Highest Roubles.
Baku Naphtha Co.	100	314	320
,, ,, ,, (issue of 1908) fully pd.	100	–	318
Balakhany Naphtha Co.	250	—	—
Caspian Society	1,000	3,775	3,800
Mazout Co.	250	—	—
Melikoff, A. C.	250	—	—
Mirzoeff Bros.	250	—	—
Naftalan Co.	250	—	—
Naphtha Co. "Kavkas"	250	—	50
Naphtha Trading Co., A. I. Mantacheff & Co.	250	126	128
Neft Co.	250	—	75
Nobel Bros.	5,000	10,500	10,575
,, ,, ...	250	—	514
Rops and Co. V...	250	315	315
Russian Naphtha Co.	250	—	—
Society Mazout	250	—	400
Ter-Akopoff Co.	250	—	—
Tumaieff & Co., J. G.	250	—	—
Volga-Caspian Naphtha and Trading Co	250	—	—
,, ,, ,, (Second Issue)	250	—	—

SCOTCH COMPANIES

Supplied by Messrs. Maclean and Henderson, Stirling.

Company.	Capital Paid Up.	Value of Share.	Latest Prices.
Broxburn Oil Co., Ltd., Ord. 17/- pd	£235,000	£1	£2 3s. 0d.
Do. 6% Cum. Pref. ..	£100,000	£10	£12 7s. 6d.
Burmah Oil, Ord.	£1,100,000	£1	£5 2s. 9d.
Do. Pref.	£250,000	£1	£1 7s 6d.
Dalmeny Oil Co., Ord. (7 paid) ..	£37,800	£8 10s	£3 10s. 0d.
Do. 5% Pref ..	£18,900	£7	£4 12s 0d.
Oakbank Oil Co., Ltd, Ord.	£170,000	£1	£1 18s. 3d.
Do. Pref. (£1 paid)	£36,980	£1	£1 4s. 0d.
Pumpherston Min. Oil Co., Ld., Ord. (17s. paid)	£110,500	17s.	£10 13s. 0d.
Do. 6% Cum. Pref.	£100,000	£10	£13 5s. 0d.
Tarbrax Oil Co., Ltd. Ord. (£1 pd.)	£65,000	£1	£2 12s. 9d
Do. 6% Cum. Pref.	£40,000	£1	£1 3s 9d.
Young's Paraffin Co., Ltd., Ord. ..	£452,808	£4	£3 12s. 6d.
Do. "B" Deb...	£150,000	£100	£164 0s.

DUTCH COMPANIES.

Company.			Latest Quotations (per cent.)
Dordtsche Petroleum Industrie My.		Aand.	154½
,, ,, ,, ..	Pref.	,,	175
Int. Roum. Petroleum Maatschappij		,,	30
Royal Dutch Petroleum Co.		,,	440
Mœara Enim Petroleum Maatschappij ..		,,	189½
Oklahoma Petroleum Co.	Pref.	,,	124
Perlak Petroleum Maatschappij		,,	155
Sumatra Palembang Petroleum Maatschappij		,,	162
Zuid Perlak Petroleum Maatschappij ..	Pref.	,,	171
Union Petroleum Co.		,,	103
Bibi-Eybat Petroleum Maatschappij		,,	28¾
Russian Petroleum and Liquid Fuel Co. ..		,,	14
,, ,, ,,	Pref.	,,	14½
,, ,, ,,	(6% Debs.)	,,	36½
Schibaieff Petroleum Co. (Ord.)		,,	5¾
,, ,, ...	Pref.	,,	7½
Shell Transport and Trading Co. ..	Pref.	,,	326

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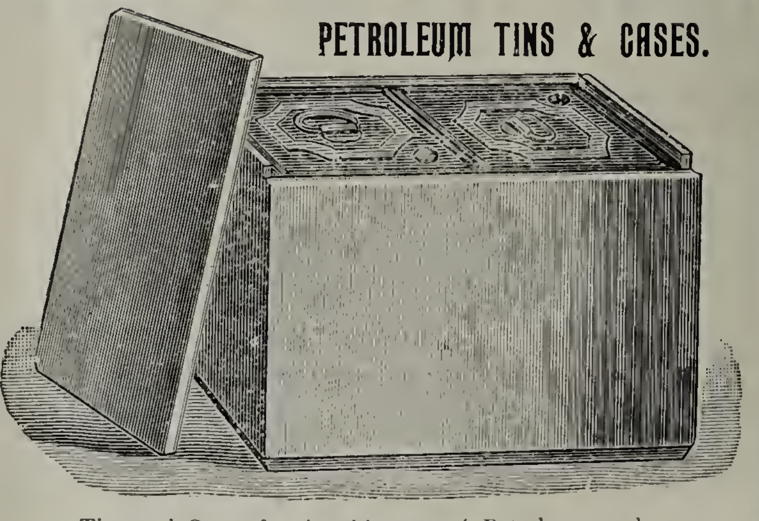

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THE
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SATURDAY, JUNE 19, 1909.

THE STANDARD IN GALICIA.

UPON another page of this issue of the REVIEW we publish several details concerning the entrance of the Standard Oil Co. into Galicia, and those who can read between the lines of the agreement which has been signed by that company on the one hand and the Galician petroleum producers on the other, will readily admit that there is every reason to believe the effect of this *rapprochement* will be for the permanent good of the Galician petroleum industry. It is well known that for a long time past the conduct of the Galician petroleum industry has been in a very sorry plight. It is not of infrequent occurrence that success spells failure in many industrial circles, and Galicia is an example. The crude oil production has gone forward with leaps and bounds until a position has been reached when prices have tumbled down to an extent that unless some drastic change speedily took place, general ruin would overtake the industry and many of those associated with it.

It was only during last year, however, that the full seriousness of the over production of the Galician fields was felt. The year was the most eventful one in the history of the country's petroleum industry, for the crude production reached the unprecedented volume of nearly 1,600,000 tons, and this, in its turn, brought about an almost complete depreciation of the product. An absolute *impasse* was created, and in spite of a general desire on the part of those interested in the industry to bring about an improved state of affairs, matters continued to increase in their seriousness.

It was perfectly clear that any measures of real relief to the industry would have necessarily to deal with conditions affecting production, storage accommodation, and the marketing of the crude and products. In the nature of the petroleum industry, experience has shewn that it is impossible to foresee the amount of the production, and no forcible measures can hinder its growth. To stop the working of existing wells, or to cause by means of restrictive measures the owners to minimise production, would only aggravate the crisis, for capital already invested must be allowed to get a return, and, again, the responsibility of throwing a very large number of men out of employment by ordering the closing of wells is too great a responsibility for any to argue to assume.

We have seen how utterly unprepared was Boryslaw for a large production of crude oil, and we are also aware that even given a combination of the large producers, difficulties, more or less serious in themselves, are bound to occur. This has been proved over and over again in successful oil field exploitation and development, and a careful consideration of all the facts of the case must convince anyone that of all the measures worthy of general adoption for the permanent relief from such an acute crisis—and it has been particularly acute in Galicia—those having as their object the extension of the market are really the only effective ones.

To the credit of the producers be it said that the first step in this direction was the conclusion of the contract with the State railways for the supply of liquid fuel, but as this only takes effect in 1910, it does not find an immediate solution of the problem. The production in the meantime is not diminishing, and the producers have naturally been in as great a need as ever for a speedy relief. It might certainly have been possible to bring about an increased export of oil to Germany, the more so, as German capital is now very heavily interested in the Galician petroleum industry, and the German producers are entitled to some protection in their own country. For reasons of commercial policy, Germany cannot introduce a differential customs tariff in favour of Galician oil, though, if it thought fit, it could further reduce the railway rates for Galician oil, and thus most substantially favour it. The Austrian railways in turn might also have taken steps to facilitate the transport of Galician oil in greater quantities by providing more adequate transport facilities.

Attempts have, in fact, been made toward this end in view of the great competition in Germany, but all to no avail. In spite, therefore, of the sincere efforts that have been made to place the Galician industry in petroleum upon a sound basis, it must be admitted that the real solution of the difficulty has only been forthcoming, by reason of the Standard Oil Co. having entered the field. The great difficulty—or at least one of the greatest difficulties up to the present—has been the want of adequate storage accommodation, and in the first place, here, as in the Mid-Continental fields of America, the Standard has come to the rescue. It is an open secret that, had Galicia possessed proper facilities for the storage of its enormously increasing production, there would never have been such a slump in prices, and thus, to a very considerable extent, the late crisis would have been averted. Fortunately for all concerned, the Standard has appeared on the scene, and by agreeing to immediately erect facilities for storage, etc., of the oil, and by its agreement to purchase from the producers their refined products, has brought into being a new era of prosperity for an industry which was sorely in need of it.

Our readers are well aware of the remarkable expansion of the operations of the Standard Oil Co., and the whole world is acquainted with what good it has done to the petroleum industry at large. America—its home —is an example of what can be accomplished by an organisation which has not only at its back unlimited financial resources, but which commands so great a part of the brains centred upon the petroleum industry. Galicia, and all interested in the development of her mineral resources, may congratulate itself upon the advent of a concern which is bound to spell success and progress to all concerned.

MESSRS. NOBEL BROS. BALANCE SHEET.

Messrs. Nobel Bros. have closed their accounts for 1908 with a surplus of 4,150,650 roubles, against 5,653,392 in 1907. The total income was 130,684,426 roubles, as against 128,034,697 in 1907, and the expenditure 124,662,392 roubles, as compared with 120,008,967 in 1907. Of the gross profit of 6,622,034 roubles, 1,954,151 were placed to amortisation and 517,232 roubles for working capital. The surplus (4,150,650 roubles) was distributed in the following way:—For taxes, 908,062 roubles (1,037,604 in 1907); participation in profits, 751,035 roubles (1,272,315 in 1907); to reserve fund, 165,000 roubles (235,000 in 1907); 15 per cent. dividend equal to 2,250,000 roubles (against 20 per cent. equal to 3,000,000 in 1907); and the rest, 76,533 roubles (108,472 in 1907) carried forward. The shareholders thus receive 750 roubles on each participating share (of 1,000 roubles) and 37·50 roubles on each ordinary share.

The quantity of refined oil sent out by the firm in 1908 was 39,652,033 poods of a value of 43·7 million roubles, as against 32,462,079 poods, value 39·9 million roubles in 1907. The quantity of mazout was 91·8 million poods, valued at 34,059,371 roubles, as compared with 85·4 million poods of a value of 34,989,266 roubles in 1907.

RECENT PETROLEUM DEVELOPMENTS IN MEXICO.

. . . CONSULAR REPORT . . .

H.M. Consul at Vera Cruz (Mr. L. J. Nunn) supplies the following information on the trade of that district for 1908, which will shortly be issued in the nature of a report:—

Judging from the way in which Mexico, from one end to the other, is being explored for indications of oil-bearing deposits, and from the discoveries that have been made, it would appear as if the country is destined to become an important producer of refined petroleum.

Oil-producing lands have been discovered in the State of Vera Cruz, near the Isthmus of Tehuantepec, and the flow of oil in the wells has been of such quantity and quality that a well-known British company have erected a large refining plant at Minatitlan, built on the most modern lines, and, as regards capacity, by far the largest in the Republic. This plant is now in partial operation. A certain part of the production is to be fuel oil, and, as the same company also work the Tehuantepec National Railway jointly with the Mexican Government, the latter's engines will be supplied with this fuel oil. Large storage tanks have been erected at Vera Cruz and other places to supply the several railways in this part of the country. When this plant is in operation it is expected that the Mexican market for foreign petroleum will disappear.

Territory Under Oil in Mexico.

Great activity continues in prospecting for and developing oil lands, and a number of foreign syndicates are said to have obtained options on extensive tracts of land in the States of Tamaulipas, Vera Cruz and Chiapas. A large number of deals have recently been closed, and the necessary drilling plants have been brought from abroad. Test borings are being made in every direction, and reports of new wells are of frequent occurrence.

The Huasteca Petroleum Co. has been granted a very favourable concession for the exploitation of oil lands in the north-eastern part of the State of Vera Cruz. Machinery, tankage and supplies for this venture may be imported free of duty, and are also exempt from Federal taxation for a term of years. The company has a capital equivalent to £100,000 and are organised under the laws of Mexico. Arrangements are under way for the construction of a pipe line to the city of Mexico.

One of the most remarkable oil wells ever known probably is that at Dos Bocas, in the northern part of the State of Vera Cruz. The well has been remarkable, not only on account of the fierce conflagration which consumed several million barrels of oil, but also on account of the tremendous force of the flow and the enormous output. Since the extinguishing of the fire, the paramount problem has been to control the flow and save the oil. Immense earthern reservoirs and dykes have been built, but the oil has over flowed these and spread over the lagoons for a distance of several miles. In addition to this discouraging predicament, men and animals have succumbed to the effects of the noxious gases which are constantly being thrown off by the well in great quantities. The company owning the well have worked incessantly and persistently, and now have it under control.

One of the effects of this development in the oil districts in Mexico has been that petroleum has come into use as a substitute for coal as fuel. Formerly the Mexican railways consumed from 120,000 to 140,000 tons of patent fuel drawn from Cardiff and district, but during the latter half of 1908 they converted 50 per cent. of their engines to oil burners, and so satisfactory and economical has the result been that it is only a matter of the erection of the necessary storage tanks for the use of coal as fuel to be given up altogether. Many industrial enterprises which were formerly coal consumers have changed, and still others are now changing, their boilers in order to use oil. This has affected the importation of coal and patent fuel from the United Kingdom and elsewhere to the extent of causing a decrease in imports of about 40 per cent. during 1908.

CLASSIFIED IMPORTS INTO UNITED KINGDOM UP TO JUNE 14th, 1909.

IN GALLONS.

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Country.	Illuminating.		Lubricating.		Residuals.		Gas Oil. (Solar)		Benzine.		Fuel Oil.		Other Descriptions.		Totals.	
	Since May 31.	From Jan. 1.	Since May 31.	From Jan. 1.	Since May 31.	From Jan. 1.	Since May 31.	From Jan. 1.	Since May 31.	From Jan. 1.	Since May 31.	From Jan. 1.	Since May 31.	From Jan. 1.	Since May 31.	From Jan. 1.
Austria ...	—	—	22,400	63,330	—	161,450	—	—	—	—	—	—	—	—	22,400	224,780
Belgium ...	—	110	35,720	323,300	—	—	—	—	—	—	—	—	—	140	35,720	323,550
Canada ...	—	—	50	50	13,340	13,340	—	—	—	—	—	—	—	—	13,390	13,390
Dutch India.	—	400	—	—	—	—	—	—	1,502,640	12,223,910	—	80	—	80	1,502,640	12,224,470
Germany ...	14.130	2,006.430	82.480	611,530	—	4,250	—	370,000	800	1,920	—	—	—	9,210	97,410	3,003,340
Holland ...	304,190	304,490	560	3,430	—	—	—	—	—	3,142,970	—	—	4,900	29,130	309,650	3,480,020
Roumania ...	—	4,325,450	—	—	—	24,000	—	2,881,800	1,034.680	3,296,900	—	—	—	—	1,034,680	10,528,150
Russia ...	1,050	9,011,090	437,420	3,185,030	141,220	260,970	—	—	—	1,242,340	—	—	—	63 780	579,690	13,703,680
U.S.A. ...	1,026,340	50,209,480	1,362,770	19,096,009	—	47,880	1,672,660	34,892,880	—	9,446,110	—	4,189 520	6,380	1,309,990	4,068,150	119,251,399
Other Countries	—	2,600	840	17,140	--	—	—	1,000	—	887,380	—	240	—	1,910	840	910,270
	1,345 710	65,860,050	1,942,240	23,299,819	154.560	511,890	1,672,660	18,145,680	2,538,120	30,241,530	—	4,189 840	11,280	1,414,240	7,664.570	163,663,049

AMERICAN NOTES.

New Interests in the Glenn Pool.—It is reported that the Texas Co. and also the Gulf Pipe Line Co. have each acquired interests in the Glenn pool.

Oil Dividends.—The total dividends paid by the oil companies listed on the Californian exchange up to date amount to $20,000,000. The dividends for April were $413,000.

Standard Oil Dividend.—The Standard Oil Co. last Tuesday disbursed a dividend for the quarter of $9 per share. The previous disbursement was on March 15th, when the dividend was $15 per share. For the past four years the dividend for the corresponding quarter has been $9 per share.

Is it Another Texas Field?—The well which was brought in at Piedras Pintas, Texas, about the middle of May, continues to flow at the rate of 400 barrels daily. Prospecting has been going on at the same spot for a few years, but the present well is the first brought in to which any commercial importance attaches.

Standard Officials in the Mid-Continent Fields.—Practically the whole of the head officials of the Standard Oil Co. of New York recently made a tour of inspection in the Mid-Continent fields, the main idea being to give many of the younger officials in the concern an opportunity of knowing the interests of the concern.

Another Pipe Line.—A pipe line to transport the oil of the independent producers in the Coalinga and Kern county field is about to be built. Its terminal point will be tide water. The question of transportation has become a very serious one for many months past, and this new project is expected to satisfactorily solve the problem.

Another Mexican Refinery.—The latest reports from Mexico state that it is now definitely known that Messrs. S. Pearson and Son, Ltd., have adopted plans for another refinery. This is to be erected upon the bank of the Panuco river, a short distance below Tampico, and at a spot where the largest ocean-going oil tankers can take their liquid cargoes aboard.

New Californian Companies.—The following companies have recently been registered in California:—The Wrenn Oil Co. ($1,000,000); California King Oil Co. ($150,000); the Diabolo Oil Co. ($250,000); Silver Top Oil Co. ($75,000); Alvarado Oil Co. ($300,000); Kern River Drillers' Oil Co. ($1,000,000); C. C. Harris Oil Co. ($300,000); the Madera Oil Mining Co. ($500,000); and the Mays Oil Co., with a capital stock of $500,000.

Mr. H. H. Roger's Successor.—Mr. James A. Moffett, a director of the Standard Oil Co. of New Jersey, will succeed the late Mr. H. H. Rogers as vice-president of the company. Mr. Moffett has had active charge of the transportation problems of the Standard Oil Co. for the past few years. Mr. Moffett, it may be recollected, is the president of the Standard Oil Co. of Indiana, upon which concern the famous $30,000,000 fine was imposed.

LAUNCH OF THE "H. C. HENRY."

The Greenock and Grangemouth Dockyard Co., Ltd., launched from their Greenock yard on Tuesday, the 8th June, an oil tank steamer of 6,200 tons carrying capacity, on 24 feet draught. The vessel is 375 feet in length, 50 feet in breadth, and 29 feet 4 inches in depth. She has been built to the highest class at Lloyds, though her scantlings are much in excess of those required by that society to enable her to withstand the stormy weather she will encounter in her usual trade. This vessel has been specially constructed for the carrying of creosote, and has a complete installation of steam-heating pipes in each hold to enable the creosote to be kept in a liquid state for easy discharging. All the latest improvements in deck machinery have been fitted for the quick loading and discharging of dry cargo. Pump rooms are fitted at the fore and aft end of the bridge, each containing a powerful set of pumps, capable of pumping from either side of the ship and discharging ashore from other side of the ship. The installations of the oil pipes and pumps are of the most up-to-date pattern. First-class accommodation being fitted amidships for officers and engineers, each having a separate room. The vessel is fitted throughout with a very complete electric light installation. The engines of 2,300 horse-power will be supplied by Messrs. David Rowan and Co., Glasgow. The vessel has been built under the supervision of Messrs. Flannery, Baggallay and Johnston, London, Liverpool and Rotterdam. On entering the water the vessel was named "H. C. Henry" by Mrs. Rood, of Seattle, U.S.A.

ENGLISH PATENT.

APPLICATION PUBLISHED IN GREAT BRITAIN.

Method of and Apparatus for Distillating Crude Petroleum.—F. Seidenschnur, No. 10959 of 1908.

This relates to a modified constructional form of apparatus for distilling crude petroleum in accordance with Application No. 10892/08, wherein the outlets for steam and oil are not arranged radially, but are directed one against the other, a steam outlet and an oil outlet being combined in the manner of an injector or praying nozzle.

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Studies in the Application of the Anticlinal Theory of Oil and Gas Accumulation.

BY

. . MALCOLM J. MUNN . .

(*Concluded from page 334.*)

In the case of the oil, the tendency would be to flatten the globules against the opposing roof of the sandstone by a rolling motion of those molecules not in contact with this surface which, compared to the size of the globule, would be of unlimited extent. This rolling motion would continue to flatten the globule until all the molecules of the oil were in contact with the roof of the sandstone, or until the tendency to flatten would be counteracted by the viscosity of the oil plus the greater molecular repulsion offered to the thinner edges of the globule by the salt water. When this stage is reached by such globules as arrive at the top of the sandstone they will behave, so far as static friction is concerned, as if they were solids. In addition to this purely static element of friction, the resistance to movement of the oil along the roof of the sandstone is made relatively enormous by the kinetic friction involved by contact of the globule of oil with the solid sand grains in front of and below it, and in forcing passage through the water-logged pores between them. Therefore, while it is not possible with the data now available to present unquestionable mathematical proof that oil could not have travelled by difference in specific gravity through the Hundred-foot sand under the conditions known in the Sewickley quadrangle, it may be shewn that such movement is highly improbable, and that the opposing forces would undoubtedly be much greater than that available for motion through difference in gravity of oil and salt water.

Griswold recognises the ability of friction to prevent movement. In the above quotation he says:—

"Here the oil and gas will remain if the porous stratum be perfectly level, but if it has a dip sufficient to overcome the friction the particles of oil and gas will gradually move up the slope."

What dip, then, is necessary to overcome friction in oil-bearing sands of average porosity? There are few, if any, places in the 1,200 square miles of territory examined by the writer in Pennsylvania where the dips of the oil-bearing strata exceed 200 feet to the mile, or approximately 1 foot in 26 feet. The average dip of the sands over the possible catchment areas will not exceed 75 feet per mile. It is probably between 50 and 60 feet, or 1 foot to approximately 100 feet. For some very large pools the catchment area of the oil-bearing sand has a dip of less than 30 feet to the mile for considerable distances on all sides of the pools. This gives a dip of 1 foot in about 175 feet. In small areas of a square mile or less that enclose pools the dip is even less than this. Advocates of movement by difference of gravity of oil and salt water, must therefore assume that the minimum dip necessary to overcome friction is less than 1 foot in 175 feet. According to the figures given above, this would furnish free force for movement equal to about ·00187 of the weight of the oil. It seems reasonable to suppose that irregularities in the top of the oil-bearing sands due, among other possible causes, to unequal deposition, would make local reverses of dip in the roof of the sandstones of such magnitude as to restrict movement by difference of gravity to very small catchment basins of, at most, only a few acres in extent. Also the supply of oil reaching the roof of the sandstone at any given point would doubtless be very small, and the accumulated supply along any line of motion very probably would not be sufficient to fill up and override these irregularities in the roof of the sandstone.

Regardless of first impressions the positions of the oil pools in the Hundred-foot sand of the Sewickley quadrangle do not support the view that the accumulations have been made through difference in specific gravity of the oil and salt water. If such movements were possible under these conditions, what is to prevent all the oil from collecting at the top of the sand or in the topmost pay streaks, leaving the lower ones to salt water exclusively. The fact is that there is no perceptible difference in the ratio of water to oil in the pay streaks at the top and at the bottom of the sand. A lower pay streak may frequently be found to furnish a greater per cent. of oil to water than another located above.

If we accept Griswold's statement of the anticlinal theory we are forced to assume that the great pressure (600 lbs. per square inch) of the oil, gas, and water in the pay streaks comes primarily from the pressure of gas indigenous to the pay streaks and formed subsequent to the accumulation of oil. It is difficult to see how such a pressure can be localised, since if the oil is free to move into the pay streaks at a pressure of about ·0067 of its weight, the gas should much more easily flow out and dissipate its pressure throughout the whole sandstone.

The facts brought out by a study of the Hundred-foot sand in the Sewickley quadrangle are corroborated by those of such of the other sands as afford reliable data for comparison. Because of a lack of facts relative to the pools in the Fifth, Fourth and Thirty-foot sands, they will not be considered, though, so far as these facts go, they are in the main corroborative.

The Moon, Coropolis, Mt. Nebo, Sandle and Wildwood pools furnish all the oil found in the Third, or Gordon sand, except a small pool on the southern edge of the quadrangle, one or two wells in the Ingomar pool, and a few wells in the vicinity of Perryville pool. These are the only pools that shew no definite relation to structure. The Wildwood, Sandle, and Mt. Nebo pools produce little or no salt water with the oil. The Coropolis pool has salt water with the oil in wells along the south-east edge, and more or less salt water in the gas wells in this sand on the Crow's Run anticline to the north-west of the oil-producing area. The behaviour of the salt water on the south-eastern side of this pool is quite different from that found in the Hundred-foot sand. Here the salt water increases in quantity and head with the life of the well. Those that at first produce oil exclusively, sooner or later shew a little salt water. This gradually increases in quantity and head with pumping until the well produces salt water and no oil. In this pool the water is slowly travelling toward the north-west, drowning the oil pool as it goes. This, at first, seems the logical conclusion to be drawn from Griswold's statement of the anticlinal theory, but when we learn that the Imperial Oil pool in this sand, which lies off the quadrangle less than three miles to the south of the Coropolis pool, and down an unbroken dip from it, has shewn little or no salt water in the Third sand, the problem takes on a new aspect. Test wells between these pools report the Third sand present in all of the records received, but few of them make any statement regarding water conditions, so it is impossible to determine the southern limit of the salt water area. From the wells of the Moon pool an increasing amount of salt water is pumped with the oil from year to year.

The wells of the Craig and Davis pools flow oil and gas from the Boulder sand. This sand is also productive in the Grubbs pool, which is the pool on the crest of the Brush Creek anticline to the north-west of Mt. Nebo pool. It also is oil-bearing in the pool to the north-east of the Crider pool. At no place to the writer's knowledge has salt water been found in the sand. Two out of the four pools mentioned are located squarely on the Brush Creek anticline, the Davis and Craig pools are near the axes of flat synclines. Most of the wells in this sand flowed oil and gas when first drilled in, but only the two last named pools and a few scattered wells continue to do so.

It will be seen that all the accumulations found in the Snee sand, of which the Duff City and Crider pools are the most prominent, occur at or near the top of the Brush Creek anticline. This sand is considered to be dry by drillers, who, so far as can be determined, have found no water in it.

In all instances the pools of oil seem to be limited by the extent of the pay streaks in which they occur, with the exception of the Moon and Coropolis pools, where a portion of the pay streaks is occupied by salt water exclusively. It may be seen, from the above brief outline, that the evidence as a whole is decidedly against the idea that these pools could have been accumulated by difference in gravity of oil and salt water.

It seems safe to say, with as much positiveness as is warranted in any case involving circumstantial geologic evidence, that the oil pools in the Hundred-foot sand of the Sewickley quadrangle have not been accumulated through difference of specific gravity of oil and salt water. While this factor doubtless had its effect, lateral movement through difference in gravity alone was so limited as to be of no consequence. What is said of the Hundred-foot sand may, in a less positive way, be said of the pools in other sands of this area, and also of all pools found under similar conditions throughout the entire Appalachian region. Since the pools in the Hundred-foot sand of the Sewickley quadrangle are examples where the idea of accumulation through difference in specific gravity of oil and salt water probably does not apply, to such an extent may we also question its application to any oil pools, no matter where they may be.

Space will not admit of a discussion being made in this paper of each of the interpretations of the "anticlinal theory" presented by American geologists. In brief, it may be said that any hypothesis based on the idea of difference in gravity as the cause of accumulation cannot be accepted as applicable in the example cited above; but in no case should the discarding of this idea be considered as affecting the validity of the structural factor involved. These two ideas are usually so closely associated that to discredit one seems to imply an equal disparagement of the other. This is not true. There is no fact more clearly established by geologic studies of oil and gas pools than that structure is an important factor of accumulation. Beyond this fact, however, theories advanced to account for it and to explain a logical sequence of events for accumulations of oil and gas pools are little more than visionary hypothesis based upon too few facts and too much speculation. That structure is an important factor in determining the position of many oil pools cannot be denied, but that it is the most important and the controlling factor can by no means be so easily proven. As an agent of transportation, water should be accredited with much, if not all, of the work, but in what way water has accomplished these results is still an open question. It is very probable that in some cases this was through difference in specific gravity of oil and water; in others through the action of moving water driven by hydraulic (not hydrostatic) pressure; in still others, the water doubtless travelled by capillarity. To the writer's mind, by far the most potent and wide-spread agent of transportation and accumulation of oil and gas is moving water, under both hydraulic and capillary pressure. With the most favourable circumstances local lateral movement by difference of gravity of oil and water might have taken place, but ordinarily this force was probably barely sufficient to produce vertical movement.

Space will not permit a theoretical application of the moving water idea of oil and gas transportation being made in this paper, nor does the writer care to advance this hypothesis in its present state of development as an explanation of the structural position of the oil pools of the Sewickley quadrangle, though it may be shewn to lend itself readily to logical solutions of many of the more difficult phases of the problem. At the present stage of the investigation of oil and gas phenomena, facts are infinitely more to be desired than theories. The writer, therefore, prefers to present the above facts as so much evidence to be weighed for what it may be worth, and to supplement it from time to time with such data as to him seems germane to the real problems of oil and gas accumulation.

The structural factor of accumulation is of great economic value, since it affects, within certain limitations, the position of oil and gas pools, and therefore, in many instances, gives a valuable clue to the location of pools in advance of the drill. In a purely theoretical sense it is a substantial nucleus of truth, around which, with great care and much patience, we must group, one by one, the other necessary parts of this most interesting geologic puzzle, before a satisfactory explanation of all the phenomena involved can be made,

THE PETROLEUM RESOURCES OF THE UNITED STATES.

By DAVID T. DAY, United States Geological Survey.

The Review has been favoured with an advance copy of the report by Dr. David T. Day upon "The Petroleum Resources of the United States," which is shortly to be issued in pamphlet form. In view of the important nature of this latest work, we intend to publish certain portions of the same *in extenso*. At the commencement of the report, the author points out that petroleum is unknown and improbable east of the Allegheny Mountains. Parallel with their western flank the Appalachian belt extends from western New York to Tennessee. It crosses western Pennsylvania, and there petroleum was first found in large quantity. The supply in Pennsylvania is rapidly becoming exhausted. It has declined to one-third of its highest rate of production. This high-production mark was only seventeen years ago. The Appalachian field continues across West Virginia and includes the eastern edge of Ohio. Farther south moderate supplies have long been known, and they are still being developed in Kentucky and Tennessee.

The petroleum of this field (known generally as Pennsylvania petroleum) differs essentially from that of the other fields in the United States. It is notably different from any other petroleum thus far found in the world. It is most easily converted into lamp oil, and yields the greatest percentage of this product. The lamp oil is the finest yet produced—in fact, much better than any other except the products from Western Ohio and Indiana, and the petroleum from this latter field costs more to refine.

Farther south, in Kentucky and Tennessee, the product is progressively poorer, but is much better than Russian or any other of the foreign products with which it comes in competition.

Lima-Indiana.—The second great field in historical development covers a considerable portion of north-western Ohio and eastern Indiana, and small isolated pools of petroleum of the same general character are found elsewhere in Indiana. This petroleum is more uniform than the Pennsylvania varieties. It contains, quite uniformly, less gasolene and less lamp oils, and the presence of organic sulphur compounds results in an average of one-half of 1 per cent. of sulphur, which can be removed only by ingenious and comparatively costly refining processes.

Illinois.—In Illinois, near the eastern edge, a strip of territory some 30 miles long and of irregular width, averaging about six miles, is yielding a comparatively enormous quantity of petroleum. It is freer from sulphur than the Lima-Indiana variety, and occasionally contains sufficient asphalt to ally it to the petroleum from the next field to the west, the Mid-Continent field.

Mid-Continent.—This comprises the pools in Kansas and Oklahoma, and must eventually include, for statistical purposes, the pools in north-western Louisiana and northern Texas. The yield from this field within the last two years has been so large as to greatly disturb the industry, on account of the difficulty of providing sufficient refining and transportation facilities. This petroleum differs from Pennsylvania petroleum in frequently containing small amounts of asphalt, and also in containing hydrocarbons less stable in their action toward the chemicals used in refining them. Nevertheless, it has proved possible to obtain good yields of perfectly satisfactory products covering the entire range from gasolene to paraffin wax. Some of the petroleum of this field contains sufficient water and other foreign materials to complicate the matter of giving it a just valuation, and also to add to the difficulty of the refining processes.

In the Mid-Continent field of the Glenn Pool, located a few miles south of Tulsa, Okla., is a good illustration of the uncertainties of petroleum production. A well drilled in 1905 happened to be located a few feet within the limits of this pool. Had it been located slightly farther to the east the field would not then have been discovered, but the very considerable flow from this well caused more than usual excitement, and nearly all of the wells drilled to the west proved good producers. The wells produced 1,000,000 barrels from 1,000 acres of ground within the year 1906. Well drilling was so rapid, in fact, that the pool reached its maximum production 13 months after the discovery of the first well, and from that time the production declined almost as rapidly as it had increased, until the decline was arrested by cleaning out the wells, and afterward, also, shooting them with nitro-glycerine. The transportation companies could not keep up with such rapid development, and perhaps 1,000,000 barrels of petroleum was wasted on the ground within two years.

Gulf.—For many years the escape of petroleum and natural gas to the surface has been noted at many points in Texas and in Southern Louisiana. This led to the drilling, in 1901, of a well at Spindle Top, near Beaumont, Tex., from which probably more than 500,000 barrels of petroleum flowed before the well could be checked. The field was soon extended to Jennings and Welsh, and eventually to Anse la Butte, in Louisiana. Other wells were rapidly drilled, resulting in a large addition to the petroleum product of the United States. This petroleum contains a large percentage of asphaltum and relatively small amounts of gasolene and lamp oils, and therefore offers little temptation to the refiner. It is also handicapped by the presence of sulphur in many forms. For some years it was disposed of principally to the railroads and burned as fuel on locomotives, and thus caused considerable industrial development in Texas, because it was necessary to sell the petroleum at prices as low as 10 cents per barrel in order to find a market for the product. After persistent endeavour it has become possible to refine this petroleum successfully, and some of the products have peculiar value. The lubricating oils find considerable favour and the gasolene has special value as a solvent, California.—Petroleum, principally asphaltic and similar to the Texas petroleum, except that it is sometimes free from sulphur, is found in many areas in California, between Los Angeles and San Francisco, the principal fields being Los Angeles City, Puente Hills, Kern River, Sunset, McKittrick, Santa Maria, Coalinga, and Fullerton. The lack of an adequate supply of fuel in California has led to very great development of the petroleum industry for this purpose, as shewn in the production tables below, and investigations have shewn that the quantity of petroleum existing in California is greater than in any other known field in the United States.

Smaller Fields.—The great fields described above are those which control the industry. West of the Mid-Continent field and east of the California field are several smaller ones (as thus far developed) in Colorado and Wyoming, with promises of fields in New Mexico, Utah, Idaho, Montana, Oregon, and Washington. In Alaska at least two petroleum pools have been discovered, which may possibly be capable of considerable output when the market conditions become favourable.

There are many regions in the United States where there is no geological improbability of finding petroleum. Such geological improbability exists where the rocks are greatly disturbed and broken up to such a depth as to prevent probable drilling to the undisturbed sedimentary rocks which could furnish good storage for petroleum.

In each petroleum field it has become necessary for the pipe line companies and for the producers themselves to locate on detailed maps every well as it is drilled, distinguishing the productive from dry wells, in order that the limitations of each field may be promptly determined. From these maps, principally, with the aid of many independent data, collected by himself, Dr. F. H. Oliphant has compiled a map of the petroleum fields in the United States, which is appended to this report.

From measurements of the areas on this map, together with revisions from the map recently published by Dr. I. C. White, State Geologist of West Virginia, and with the aid of Dr. H. Foster Bain, director of the Geological Survey of Illinois; Ralph Arnold, in charge of the petroleum investigations in California for the United States Geological Survey; A. C. Veatch, for Wyoming; Dr. J. A. Bownocker, State Geologist of Ohio; and with additional data from Dr. Oliphant, the following table has been compiled, giving in square miles the area of petroleum territory in each State. The figures here given are merely general approximations, which lack very much in uniformity. In some States the area shews simply actual "proved territory." In others, as in Alabama, it indicates the region in which the future production of petroleum is probable. In many others considerable territory is included between individual pools, which in all probability will prove to be barren, and while the extensions of "proved territory" will, to a certain extent, offset that which proves eventually to be barren, the table is, at best, a rough approximation. It takes no account whatever of the fact that other fields now altogether unknown, will be developed in the future.

State	Square Miles.	State.	Square Miles.	State.	Square Miles.
Alaska ..	100	Louisiana ..	60	Pennsylvania ..	2,000
Alabama	50	Michigan ..	80	Tennessee ..	80
California	850	Missouri ..	30	Texas	400
Colorado	200	New Mexico	80	Utah	40
Idaho ..	10	New York ..	300	West Virginia	570
Illinois ..	200	Ohio:		Wyoming ..	750
Indiana ..	1,000	Eastern	115		
Kansas ..	200	Western	535	Total ..	8,450
Kentucky	400	Oklahoma ..	400		

The thickness of the "pay sands" in these fields varies within wide limits. In West Virginia, Dr. White considers five feet of "pay sand" to be a safe estimate in good producing territory. This is sufficiently liberal for Pennsylvania also. In other fields much thicker "pay sands" are recognised. In Illinois the "pay" streaks in the petroleum sands vary from two feet to over 30 feet in thickness, and at Spindle Top, in Texas, an average thickness of over 75 feet has been calculated. In California, particularly in the Kern River field, the "pay sands" reach a thickness of over 100 feet.

The rocks composing the "pay" streaks in the petroleum-bearing formations of the United States vary from sandstones and dolomites, with the compactness of ordinary building stone, to unconsolidated sands and coarse gravel, and, in exceptional cases, honeycombed limestones, in which actual cavities of considerable size have to be reckoned with. It has been customary to consider 10 per cent. as near the average porosity of the "pay sands," with a latitude of variation from practically nothing in damp shales to over 30 per cent. in the most porous strata.

The principal effect of these variations in porosity is rather upon the rate at which the petroleum can be obtained from the pool than upon the total amount obtainable.

PROBABLE SUPPLY OF PETROLEUM.

Assuming 10 per cent. as the average porosity of "pay sands," one cubic foot of "pay sand" would yield approximately one gallon of petroleum, or 5,000 barrels per acre of "pay sands" with an average thickness of five feet.

The thickness most frequently reported for the "pay sands" of various fields is normally much in excess of five feet. In Pennsylvania, the reported thickness of petroleum-bearing strata will average more than this, and frequently more than one stratum has been noted in the same well, and yet, as will be shewn in the tables of production below, the average yield per acre in Pennsylvania has been less than 800 barrels, and at the present rate of decline it is not probable that more than 800 barrels per acre will be obtained on the average in New York and Pennsylvania. It is fair to assume that 1,000 barrels per acre is a sufficient allowance for New York, Pennsylvania, West Virginia, Kentucky, Tennessee, Ohio, and Indiana. In Illinois, where the yields have been unusually great on account of "pay" streaks approximating 25 feet on the average, Dr. Bain estimates 8,000 barrels per acre as the result of conferences with the producers. This is taking into consideration the fact that in the northern portions of the field the yield is frequently not greater than 2,500 barrels per acre. In the Texas field the supply is better calculated by consideration of the amount already yielded and the rate of decline, from which it is estimated that the Texas fields will surely yield 200,000,000 barrels, and Louisiana 50,000,000 barrels. In Oklahoma the remaining productive capacity is estimated by Mr. W. J. Reed, of the United States Geological Survey, at a minimum of 282,875,000 barrels. In the remaining fields, outside of California, 1,000 barrels per acre is believed to be a sufficient allowance for the known fields.

In California very careful measurements by Mr. Arnold have resulted in an estimate of 8,500,000,000 barrels of petroleum stored in the rocks of that State, of which perhaps 5,000,000,000 barrels may be expected to be produced. Recognising that the amount of oil obtainable from these known fields is a matter largely of conjecture, it can only be based as above, upon what the fields have already yielded, and upon the thickness and relative porosity of the sands, but estimates of different authorities must vary between wide limits, and this should be borne in mind in considering the following table :—

ESTIMATED MINIMUM AND MAXIMUM TOTAL YIELD OF THE PETROLEUM FIELDS OF THE UNITED STATES.

	Minimum.	Maximum.
Appalachian field	2,000,000,000	5,000,000,000
Lima-Indiana field.. ..	1,000,000,000	3,000,000,000
Illinois field..	350,000,000	1,000,000,000
Mid-Continent field ..	400,000,000	1,000,000,000
Gulf field	250,000,000	1,000,000,000
California field	5 000,000,000	8,500,000,000
Minor fields	1,000,000,000	5,000,000,000
Total	10,000,000,000	22,500,000,000

(*To be continued.*)

THE INDIAN PETROLEUM MARKET.

(*Crowded out of page* 369.)

BOMBAY, May 24th.

The petroleum market is strong. The following are the current prices of the Standard Oil Co. of New York:

		Rs.	a.	p
Snowflake Brand, 150 deg , American	(per case)	6	4	2
White Rose, 150 deg. ,,	,,	6	4	2
Chester Brand, 76 deg. Abel	,,	4	12	2
Devoe's Brilliant	,,	4	12	2
Monkey Brand, 76 deg. Abel	,,	4	6	2
Elephant Brand, 125 deg. (bulk in tins)	(per 2 tins)	3	15	0
Elephant Brand, 125 deg (bulk without tins) (per 8 Imperial gallons)		3	5	0

The following are the current prices of the Asiatic Petroleum Co., Ltd.:—

		Rs.	a.	p.
Swan Brand, bulk loose..	(per unit)	2	15	0
Swan Brand, new tins	(per pair)	3	9	0
Ship Brand, bulk loose	(per unit)	3	15	0
Ship Brand, new tins	(per pair)	3	15	0
Rising Sun Brand, bulk loose	,,	3	7	0
Rising Sun Brand, new tins	,,	4	1	0
Anchor Cases	(per case)	4	6	0
Silver Light 150 deg. cases, ...	(per case)	5	4	0

The prices of the Burma Oil Co.'s productions are as under:—

		Rs.	a.	p.
Kerosene, Victoria	(per 2 tins)	3	8	0
Kerosene, Victoria	(per 8 gallons)	2	14	0
Kerosene, Chukker	(per 2 tins)	3	15	0
Kerosene, Chukker	(per 8 gallons)	3	5	0
Burmah Wax	(per pound)	0	4	0
Burmah Candles	,,	0	5	0

◆

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PETROLEUM IMPORTS INTO THE UNITED KINGDOM DURING MAY.

THE SHIPMENTS INTO VARIOUS PORTS.

The imports of petroleum and its various products into the different ports of the United Kingdom during May amounted to 33,001,790 gallons. The details of the shipments are :—

PORT.	Illuminating.	Lubricating.	Residuals.	Gas Oil. (Solar.)	Benzine.	Fuel Oil.	Other Descriptions.
Aberdeen	8,000	1,050	—	—	—	—	—
Barrow...	654,030	—	—	—	1,925,440	—	—
Belfast	250	470	—	—	—	—	—
Bristol	421,000	145,920	2,250	423,970	—	—	22,220
Cardiff	401,220	—	—	—	—	—	—
Cork	—	40	—	—	—	—	—
Dublin	—	500	—	470,390	—	—	—
Dundee	—	7,440	—	—	—	—	—
Glasgow	—	236,000	—	—	—	—	—
Goole	—	190	—	—	—	—	—
Grangemouth	10,280	6,510	—	—	—	—	—
Grimsby	—	3,520	—	—	—	—	—
Harwich	—	2,910	—	—	—	—	—
Hull	—	315,700	—	—	740,000	—	—
Leith	26,640	10,200	—	—	—	—	—
Liverpool	1,303,650	715,560	—	1,307,330	—	—	11,500
London	4,086,180	842,410	—	9,269,190	6,943,770	—	4,910
Manchester	2,960	790,840	—	1,840,420	—	—	10,780
Middlesbro'	—	2,490	—	—	—	—	—
Newcastle	—	16,000	—	—	—	—	—
Newport	—	300	—	—	—	—	—
Plymouth	—	700	—	—	—	—	—
Southampton	—	11,850	—	—	—	—	—
Stornaway	1,000	—	—	—	—	—	—
Swansea	—	3,810	—	—	—	—	—
Totals	6,915,210	3,114,410	2,250	13,311,300	9,609,210	—	49,410

THE STANDARD OIL COMPANY AND THE GALICIAN PETROLEUM INDUSTRY.

AN AGREEMENT WITH FAR-REACHING EFFECTS.

The success of the Standard Oil Co. in Austria seems to be now assured by the signing of an agreement between the American company and the Association of the Petroleum Producers of Galicia.

The agreement in Galicia is a direct result of the fight the Standard has waged against the selling organisations on the German market, where the Galician oil has commenced to very seriously compete with their trade.

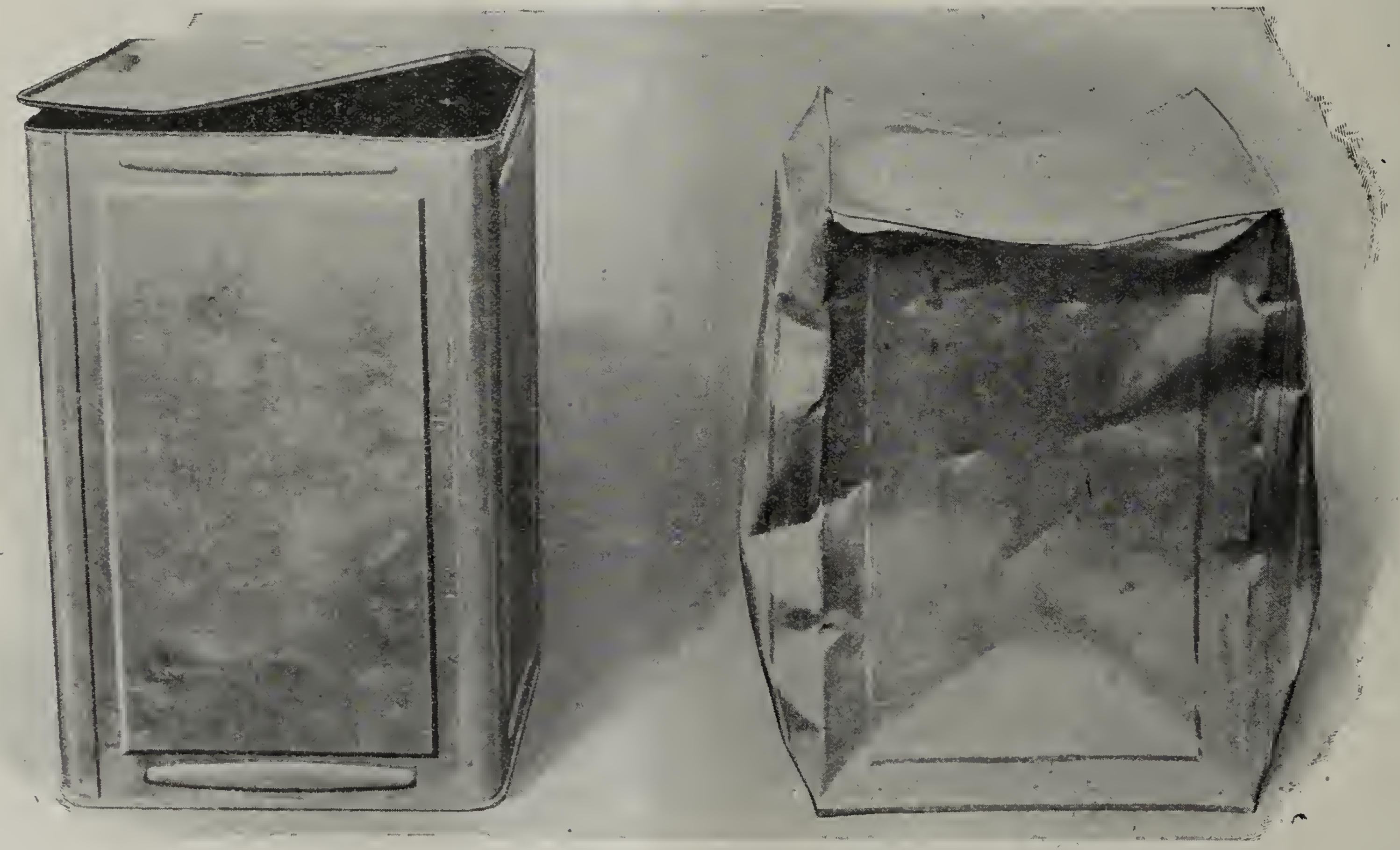
In its latest issue, the *Moniteur du Petrole Roumain* states that the Standard appears since to have played the *role* of the saviour of the Austrian petroleum industry, and the most interesting fact is that the Government is quite pleased with the idea of the Galician petroleum industry working hand in hand with the Standard, provided the latter gave certain guarantees.

According to the agreement, the Standard undertakes to erect a hundred tanks of 1,000 tons capacity each, which are conceded to the use of the Galician Association for four years, at the end of which time half of the tanks become the property of the Association and the remainder that of the Standard.

As is known, the Association has a contract with the administration of the Austrian railways to supply it with a certain quantity of residuals which the Association has to produce at the debenzination refinery built at the expense of the State. On each 100 kilos. of crude oil the Association has to produce 75 per cent. of residuals, and of the other 25 per cent., 10 per cent. of illuminating oil and 5 per cent. of benzine. The Standard guarantees to purchase from the association the whole of the illuminating oil and of the benzine at a fixed price, namely, 1 crown and 5 hellers for the total quantity of oil and benzine obtained from each 100 kilos. But if an amalgamation of refiners is formed the Standard will increase this price to 1 crown 15 hellers. On the other hand, if the refineries pass into the hands of the Standard, it will supply the railways with residuals itself and pay to the association a bonus of 65 hellers on each 100 kilos. or to the amalgamation (if such is formed) 75 hellers.

Among the producers in Galicia the understanding between the Association and the Standard has produced a very favourable impression. The producers expect an era of prosperity to begin as soon as they will cease to be forced to sell their crude at low and unprofitable prices owing to want of storing accommodation. The refiners, naturally, are displeased with the entrance of the Standard into the Galician petroleum industry, but, although they could not any longer buy the crude at exceedingly cheap prices as before, by forming an amalgamation, they will be able to sell their refined products at considerably enhanced prices.

CAN-MAKING PLANT.



American "Hemmed-edge" Can, showing how easily the end can be forced off.

"Rhodes" "Double-seamed" Can, after being heavily hammered the ends are just as firmly attached.

DOUBLE SEAMED CANS, as made by "Rhodes" Patent Machinery, are produced at **same or less cost** in every respect as the "Hemmed-edge" Can.

Sole Makers— **J. RHODES & SONS, LTD.,** Grove Iron Works, WAKEFIELD, ENG.

The American Oil Market.

New York, Week ended June 5th.

While the favourable record of completions and new production reported previously in the fields of West Virginia, Pennsylvania, Ohio, Indiana, Kentucky and Illinois has not been approached by the returns of the current week, conditions throughout the Eastern districts remain fairly encouraging and seem promising for continued activity over the next few months. Probably the most interesting developments of the week under review are to be found in the South-eastern Ohio results. The Scottown pool in Washington county furnished a well of exceptional capacity, the flow for the first three hours being reported as averaging 20 barrels an hour, and subsequently settling down to about 400 barrels a day. In the same district a 200-barrel well was brought in. Of the 12 wells completed in Washington county during the week, all but two were producers. Fairfield county operations in the same section were also attended with gratifying results, three wells, yielding a total of 505 barrels as the daily average. These wells are deep sand producers, says the *Oil, Paint and Drug Reporter*, and, as a rule, soon shew material declines. In the same formation in Perry county, several completions of more than the average capacity have been drilled, and in these two counties more work is said to be in progress than in any other section of the high grade fields. Late advices state that about 100 wells are in the course of drilling or starting there. Another active part of South-eastern Ohio is the Steubenville development of Jefferson county, the noteworthy completion of the previous week, credited with 500 barrels a day after agitation, furnishing the keenest incentive to operations in the neighbourhood. A large amount of territory has been leased, and new locations and wells are being started every day. The best return of the week in Jefferson county was a 150 barrel producer. West Virginia results were comparatively unimportant during the interval, the new production being less than one-half of that of the former period, from one less the number of completions than was formerly recorded. Our Kentucky correspondent writes of keener drilling in the lower section of the State, following the stimulating results recently experienced in Wayne county. During May more wells were completed in Illinois than during any other month since last September, and the new production was greater during May than during recent months. Reviewing the Mid-Continent situation for May, our correspondent records one less completion in the entire field than was reported for the previous month, but with a decrease of 35 oil wells the new production was nearly 600 barrels below the former total. A comparison of results for the first five months of this year, with those of the corresponding period of last year in the Mid-Continent field shews a gain of 601 completions, and an increase of 97 failures. Stocks of California crude are, it is reported, increasing at the rate of 24,000 barrels a day, and the outlook is believed to be for a continued surplus rather than a decrease.

Refined and Products.—Conditions in the local market for refined prompt little of noteworthy interest and trading, on the whole, has been of a rather routine character. Domestic requirements reflect the influence of the lengthening days. The export movement has also involved lighter proportions, our record of clearances for the week shewing a total of 7,861,270 gallons, of which 6,265,000 gallons were forwarded in bulk, against an aggregate of 11,250,270 gallons previously reported. More interest, however, was manifested in future shipments for export, and engagements were consummated for 170,000 cases for Australia, August-September, and 160,000 cases for New Zealand, September, New York loading, and 170,000 cases for China, July, Philadelphia loading. Clearances of naphtha for the week totalled 472,670 gallons, against 1;201,730 gallons previously recorded. Values are without quotable change. Three tank steamers sailed during the past week from New York with refined petroleum and naphtha in bulk. They were the following:—The German steamer, "Excelsior," for Flushing (for orders) with 1,265,000 gallons refined and 400,000 gallons naphtha; the British steamer, "Narragansett," for London, with her usual large cargo of 3,200,000 gallons refined and the British steamer, "Chesapeake," for Karachi and Bombay with 1,800,000 gallons refined. The British steamer, "Borderer," which was chartered during March, also sailed for Pekalongen, Java, with 160,340 cases refined.

CLOSING QUOTATIONS.

Crude at the Wells.

The quotations for oil represented by credit balances were:—

	Week ended June 5. 1908.	June 5. 1909.
Pennsylvania	$1·78	$1·68
Tiona	1·78	1·68
North Lima	1·04	0·94
South Lima	0·99	0·89
Indiana	0·99	0·89
Illinois, heavy, below 30 deg.	0·60	0 60
Kansas and Indian Ter., 32 deg. and above	0·41	0·41
Heavy	0·28	0·28
Humble, Tex.	0·60	0 60
Saratoga	0·54	0·58
Sour Lake, Tex.	0·57	0·62
Jennings, La.	0·55	0·54
Santa Maria	—	1·00
Coalinga	—	0·60
Canadian Oil:—		
Petrolia	1·44	1·34
Oil Springs, less pipeage	1·51	1·41

Refined—For Export.

In cents.		Week ended June 5. S.W. 110 test.	W.W. 150 test.
Barrels, cargo	per gal.	8·50	@10·00
Philadelphia		8·45	@ 9·95
Bulk, New York		5·00	@ 6·50
Bulk, Philadelphia		4·95	@ 6·45
Cases, New York		10·90	@12·40
Cases Philadelphia		10 85	@12·35

Refined in Cases—110 Fire Test.

	Week ended May 29. 1909.	June 5. 1909.
3,000 to 10,000	11·05	11·05
1,000 to 3,000	11·10	11·10

Refined—Jobbing Lots

In barrels, pkgs. included.

	Week ended May 29.	June 5.
130 fire test, S.W.	11¾	11¾
150 fire test, W.W.	12¼	12¼
In bulk from tanks	9	9
200 fire test	13@13¾	13@13¾

Naphtha and Gasolene.

	Week ended May 29.	June 5.
Naphtha, V. M. and P. deod.	11	11
Gasolene, 86 deg.	21¾	21¾

Pennsylvanian Oil Runs from May 27th to June 2nd were:—May 27th, 188,639*; May 28th, 29th and 30th, 450,524*; May 31st, 113,959; June 1st, 187,128*; and June 2nd, 106,233.

* Includes Illinois Oil.

The Deliveries of Pennsylvanian Oil from May 28th to June 3rd were:—May 28th, 165,457*; May 29th, 30th and 31st, 477,895*; June 1st, 160,394*; June 2nd, 197,879*; June 3rd, 146,704.

* Includes Illinois Oil.

Clearances for the Week.

During the week ended June 4th and since Jan. 1, the clearances of petroleum, in gallons, from the port of New York, were as follows:—

	Week.	Year.	1908.
Refined	7,861,270	238,626,460	269,411,718
Crude	600	16,502,695	12,838,275
Naphtha	472,670	18,364,365	7,731,060
Residuum	7,000	218,970	687,850

Export Statistics.

The total exports from the port of New York and from the United States have been:—

	Gallons.
From New York, week ended June 4th	10,482,293
Total from New York, from Jan. 1st, 1909	334,672,308
Same period last year	372,073,896
Decrease	37,401,588
From United States, week ended June 4th	22,293 486
Total from United States, since Jan. 1st, 1909	567,989,523
Same period last year	658,314,905
Decrease	90,325,482

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The "Review" Shipping List.

JUNE 18, 1909.

(The following abbreviations are used in this table:—L. Left; P. Passed; Arr. Arrived; Sp. Spoken; Tr. Trading.)
Anglo-American Co.'s vessels marked thus (□): the Anglo-Saxon Co.'s tankers thus (*): and Messrs. Lane and Macandrew's thus (†).

Vessel.	From.	For	Latest Date and Position.
ALCHYMIST	Terneuse	Christiana	P. Falder, June 12
ALICE ET ISABELLE (Fr. bq.)	—	—	In Port Rouen, May 29, laid up
AMERICAN	Antwerp	New York	P. Scilly, June 12
APPALACHEE □	Sabang	U.S.A.	At St. Vincent (C.V.), June 11
APSCHERON	Batoum	St. Louis (Rhn) & Genoa	P. Constant'ple, June 13
ARAL	Tyne	Philadelphia	Arr. June 13
ARAS	Penarth	New York	L. June 7
ASHTABULA □	Hong Kong	San Francisco	S. Yokohama, May 23
ASTRAKHAN	Philadelphia	Copenhagen	Arr. June 7, in Port, June 14
AUGUSTA	—	—	Off Southend, June 16, laid up
AUGUST KORFF	Hamburg	Philadelphia	P. Prawle Pt., June 15
AUREOLE	London & Norfolk (Va.)	Galveston	P. Sand Key, June 14
BAKU STANDARD	—	—	In Port Cardiff, June 15
BALAKANI†	New York	London	L. June 13
BATOUM	Port Arthur (Texas)	Liverpool	L. June 2
BAYONNE	Philadelphia	Savona	P. Del. Break., May 29
BEACON LIGHT	Kustendje	Cette	Arr. June 15
BLOOMFIELD	Emden	Galveston	?P. Scilly, June 5
BORJOM	At Alexandria	Batoum	L. June 4
BRILLIANT	Gothenburg & Tyne	Philadelphia	Arr. June 15
BROADMAYNE	—	—	In Tyne, laid up
BUFFALO	Hamburg	—	P. Dover, June 16
BULLMOUTH*	Calcutta	Singapore	Arr. May 26
BULYSSES*	Singapore	Rotterdam	Arr. June 8, in Port, June 15
BURGERMEISTER PETERSEN	Philadelphia	Stettin	Arr. June 11
BUYO MARU	Yokohama & Payta	Honolulu	Arr. June 1
CADILLAC	Philadelphia	Calcutta	Arr. abt. June 4
CALCUTTA (B. b.) □	San Francisco	Shanghai	L. April 8
CAPTAIN A. F. LUCAS (with S.O. Barge 95)	Rotterdam	New York	Arr. June 5, in Port, June 7
CARDIUM*	Singapore	Europe	Sd. Port Natal, May 25
CARPATHIAN†	Newport N'ws	London	L. June 9
CAUCASIAN†	Port Arthur (Texas)	Belfast	L. June 11
CHARLOIS	Philadelphia	Amsterdam	P. Del. Break., June 6
CHESAPEAKE □	New York	Bombay	L. June 5
CHESTER	Antwerp	Tyne	Arr May 27
CHEYENNE	Stockholm	Tyne	Arr. June 13
CITY OF EVERETT (with S.O. Barge 94)	New York	Boston	Arr. June 4
CIUDAD DE REUS	New York	Barcelona	Arr. June 6
CLAM*	Balekpappan	Singapore	Arr. June 16
CLEARFIELD	Tyne	New York	P. Dunnet Head, June 15
CONCH	Batoum & Kurrachee	Bombay	Arr. abt. June 7
CONRAD MOHR	Tees	Tyne	Arr. June 5
COWRIE*	Balekpappan	Calcutta	S. Freshwater, June 8
CUYAHOGA □	New York	Bombay	P. Perim, June 8
CYMBELINE	—	—	In Port Penarth, June 16
CZAR NICOLAI II.	Batoum	Hamburg	P. Gibraltar, June 15
DAGHESTAN	Batoum	Thameshaven	P. Beachy Head, June 16
DAKOTAH □	San Francisco & Moji	Hong Kong	S. Shanghai, May 20
DANUBIAN	Port Arthur (Texas)	London	L. June 16
DELAWARE □	New York	Sunderland	L. June 6
DERBENT	Batoum	Antwerp	Arr. June 8, in Port, June 14
DEUTSCHLAND	Rotterdam	New York	Arr. June 13
DIAMANT	Philadelphia	Copenhagen	At Newport News, June 4
EDWARD DAWSON	New Orleans	Port Arthur	Sd. Port Eads, June 6
ELAX*	Singapore	Shanghai	L. June 1
ELISE MARIE	Swinemunde	Hamburg	Arr. May 19, in Port, June 13
EL LOBO	Buenos Ayres	Callao	Arr. June 11
ENERGIE	Philadelphia	Stockholm	L. June 9
ERIVAN	Philadelphia	Genoa	L. June 11
ETELKA	Kustendje	—	P. Tarifa, June 11
EUPLECTELA*	Soesoe	Singapore	Arr. June 11
EXCELSIOR	New York	Hamburg	P. Dover, June 15
FRANCE MARIE (French bq.)	New York	Marseilles	Arr. June 5, in Port, June 15
GEESTEMUNDE	Philadelphia	Stettin	Arr. June 11
GENESSE □	Sunderland	New Orleans	P. Scilly, June 8
GEORGIAN PRINCE	—	—	In Tyne, laid up
GOLDMOUTH*	Hamburg	Tyne	Arr. June 17
GUTHEIL	Philadelphia	Havana	L. June 9
HAINAUT (Du. sh.)	New York	Antwerp	L May 25
HARRY WADSWORTH	Sabine Pass	London	L. June 8
HELIOS	New York	Stettin	Arr. June 14
HERMIONE	Rotterdam	Cardiff	Arr. Mar. 22, in Port, June 15
HESPERUS	Rotterdam	New York	L. June 13
HOTHAM NEWTON	Tees	Batoum	Arr. June 15
HYRCANIA	Tyne	Batoum	P. Gibraltar, June 10-11
IOANNIS COUTZIS	Ibrail	London	S. Sulina, June 8
IROQUOIS □ (towing barge Navahoe)	New York	London	L. June 6
J. B. AUG. KESSLER	Sabang	—	At Port Natal, abt. June 11
JAMES BRAND	Port Arthur (Texas)	Manchester	P. O. Hd. Kinsale, June 16
JOYO MARU	London	Newport	Arr. June 9, in Port, June 16
JULES HENRI (French bq.)	Cette	Marseilles	Arr. Mar. 26, in Port, June 15
KURA	Tyne	Philadelphia	P. Dunnet Head, June 14
LA CAMPINE	Philadelphia	Antwerp	Arr. June 8, in Port, June 14
LA FLANDRE	Philadelphia	Ghent	P. Del. Break., June 3
LA HESBAYE	Antwerp	Philadelphia	Arr. June 13
LACKAWANNA □	At New York	Kurrachee	L. June 5
LANSING	Port Harford	Panama	L. May 16
LE COQ†	Philadelphia	La Pallice & Santander	L. June 13
LOUTSCH	Novorossisk	Odessa	Arr. May 27, in Port, June 7
LUCERNA	Novorossisk	Brunsbuttel	Sd. Algiers, June 16
LUCIGEN	—	—	In Tyne, April 20, ld. up
LUCILINE†	Cardiff	Novorrossisk	L. June 12
LUMEN	—	—	In Tyne, June 10, repairing
LUTETIAN†	Kustendje	Havre & Rouen	P. Pera, June 13
LUX†	Bilbao	Tyne	Arr. May 30
MAKKAVEI	—	—	In Port Odessa, May 27
MANHATTAN	New York	Algiers & Tunis	L. June 8
MANNHEIM	Copenhagen	Philadelphia	P. Dunnet Head, June 9
MARGARETHA	Kustendje	Hull	P. Finisterre, June 14
METEOR	Vladivostock	Batoum	Sd. Constant'ple, June 7
MEXICAN PRINCE	Banes	Flushing	Arr. June 11
MINA BREA	Greenock & Cardiff	Callao & Talara	At Callao, June 6
MINHLA	Rangoon	Chittagong	L. June 14
MIRA	—	—	In Port Blyth, laid up
MUREX*	Freshwater	—	S. Sabang, June 10
NARRAGANSETT	New York	Avonmouth	Arr. June 14, in Port, June 15

Vessel.	From.	For.	Latest Date and Position.
NEW YORK□	Rotterdam	New York	Arr. June 14
NIAGARA	San Francisco	Madras & Calcutta	At Karatzu, May 30
OBERON	Port Arthur (Texas)	Cardiff	Arr. May 17, in Port, June 15
OCEAN	Baltimore	Antwerp	P. Cape Henry, June 7
OILFIELD	Port Arthur (Texas)	Norfolk (Va)	L. June 12
OKLAHOMA	New York	Port Arthur (Texas)	Off Barnegal, June 2
ORIFLAMME†	Bordeaux	New York	P. Lacoubre, June 13
OTTAWA□	Tyne	New York	P. Dunnet Head, June 12
OURAL	Batoum	Rouen	Arr. June 15
PATELLA	Port Arthur (Texas)	Rouen	At Newport News, June 12
PAUL PAIX	Hull	New York	P. Scilly, June 9
PAULA	Rotterdam	Philadelphia	P. Lizard, June 7
PECTAN*	London	Tyne	In Tyne, June 15
PENNOIL	Tyne	Philadelphia	Arr. June 12
PETROLEINE	Philadelphia	Cette	P. Del. Break., June 7
PHOEBUS	New York	Hamburg	Arr. May 19, in Port, June 13
PINNA†	Negritos	Yokohama	L. June 14
POTOMAC□	Liverpool	Philadelphia	Arr. June 8
PROGRESSO ARGENTINA (Ar. bq.)	Port Arthur (Texas)	Campana	Arr. April [illegible]3
PROMETHEUS	New York	Hamburg	L. June 12
PRUDENTIA	Tees	Thameshaven	Arr. June 14
PURELIGHT	Philadelphia	Dover	L. June 8
QUEVILLY (Fr. bq.)	Rouen	Rotterdam & New York	At Rotterdam, June 15
RENDOVA (Br. bq.)	New York	Corunna	Arr. May 29, cd. Juel Gijon
RION	Penarth	Philadelphia	P. Barry Island, June 5
ROCK LIGHT†	Bermuda	Galveston	Arr. June 7
ROMANY*	Singapore	Kobe	L. June 5
ROTTERDAM	Antwerp	New York	Off the Wight, June 5
ROUMANIAN†	Philadelphia	Amsterdam	L. June 12
RUSSIAN PRINCE	Tyne	Cienfuegos	Arr. May 28, Sd. May 31, U.K.
SALAHADJI	Balekpappan	—	S. C'lm'bo, May 18
SAN CRISTOBAL	Liverpool	Port Arthur (Texas)	L. June 13
SAN IGNACIO DE LOYOLA (Sp. bq.)	Pasages	New York	L. May 27
SANTA MARIA	Taltal	Pt. San Luis	S. Callao, May 27
SANTA RITA	Panama	Pt. San Luis	L. May 16
SARANAC□	Venice	New York	Arr. June 3, in Port, June 5
SAXOLEINE	La Pallice & Dartmouth	Kustendje	P. Gibraltar, June 16
SCHUYLKILL	At New York	Hankow	L. June 5
SEMINOLE□	San Francisco	Muroran	L. June 3
SERVIAN†	Antwerp	Port Arthur (Texas)	P. Lizard, June 9
SNOWFLAKE	Tyne	Cuba	P. Dover, June 2
SOYO MARU	Yokohama	Muroran	L. April 27
SPONDILUS*	Cardiff	Singapore	Arr. abt. June 14
STANDARD	Danzig	Philadelphia	In Tyne, June 15
STROMBUS*	Thameshaven	London	Arr. June 4, in Port, June 16
SULTAN VAN LANGKAT	Singapore	Swatow & Hong Kong	L. May 14
SUN	Sabine	Philadelphia	Arr. Mar. 27
SUNLIGHT (Br. bq.)	Cardiff	Port Arthur (Texas)	P. Barry Island, May 22
SURAM	Batoum	Gothenburg	P. Elsinore, June 15
SUWANEE□	Barrow	New York	P. Fastnet, June 10
SVIET	Batoum	Odessa	Arr. May 1, in Port, June 3
TAMARC□	Baltimore	London	Arr. June 12, in Port, June 16
TELENA*	Sabang	—	Sd. Port Natal, June 8
TEREK†	Kustendje	Hamburg	P. Gibraltar, June 13
TEXAS	New York	Tampico & Vera Cruz	At Tampico, May 22
TIFLIS	Manchester	Batoum	Sd. Liverpool, June 15
TIOGA□	Liverpool	New Orleans	Arr. June 15
TONAWANDA□	San Francisco	Muroran	L. May 24
TRINCULO	London	Newport	Arr. May 29, in Port, June 15
TROCAS	Freshwater	Adelaide	Arr. June 13
TUSCARORA	Blexen	Tyne	Arr. June 3, in Port, June 8
VEDRA	—	—	In Tyne, laid up
VILLE DE DIEPPE (Nor. bq.)	Rouen	Philadelphia	L. June 4
VOLUTE	Shanghai	Singapore	Arr. June 10
WASHINGTON	Barry	Philadelphia	L. June 8
WASHTENAW	Vancouver	Seattle	L. May 21
WEEHAWKEN	Kustendje	London	P. Southend, June 17
WILLKOMMEN	New York	Stettin	Arr. May 27
WINNEBAGO	Shanghai	San Francisco	Arr. June 15

Latest Market Intelligence.

LONDON OIL MARKET.

Supplied by Messrs. Benjamin & Gee, 31, St. Mary Axe, E.C.

June 18th, 1909.

The prices of Refined Petroleum remain unaltered as follows:—Russian, 6d.-6¼d.; American, 6¼d.-6⅜d.; Water White, 7¼d.-7⅜d.; Roumanian, 7d.

LUBRICATING OILS

are unchanged, latest quotations being:—

American pale, £6 10s. to £10 10s.
American dark cylinder, from £8.
American filtered cylinder, from £11 5s.
No. 1 Russian, for Spot, £8 2s. 6d.

TURPENTINE.

The demand for American Turpentine has improved, and the price has been over 30s, but is now quoted for Spot 29s. 9d.; July/December, 30s. 3d.; September/December, 30s. 6d.

LIVERPOOL OIL MARKET.

June 17th.

Refined oils are quiet, and sellers quote 6¾d., for Russian, Galician or Roumanian; and 7¼d. to 8¼d. per gallon for American.

Petroleum Spirit continues at 1s. 0d. to 1s. 2d. per gallon for duty paid lots, at which price there is a fair demand ruling.

LATEST AMERICAN PRICES.

New York, June 17th.

Refined, in cases, is steady at 10·90; Standard White, 8·50; Credit balances, 1·68.

Philadelphia, June 17th.

Standard White is now quoted at 8·45.

RUSSIA.

Baku, June 17th.

The Baku oil market remains unchanged. Crude oil, spot, 22 copecs per pood. Residuals, 22 copecs. Kerosene, in ships, 29½-30 copecs.

BELGIUM.

Antwerp, June 16th.

The petroleum market is firm. Price of Standard White, spot, 22 francs per 100 kilos; June, 22¼; June/July, 22½.

FRANCE.

Paris, June 18th.

Illuminating oil is quoted in bulk, in whole tank waggons, 23·50 francs per hectolitre; spirit, 33·75 francs per hectolitre. Special white oil, in barrels or cans, 31·50 francs per hectolitre.

GERMANY.

Hamburg, June 17th.

The kerosene market is unchanged. The price of American Standard White is 7·20 marks per 50 kilos.; Galician, 6·75 marks. Russian and Roumania not offered.

ROUMANIA.

June 16th.

	Francs.
Crude oil from different fields, including pipe line charges, per 100 kgs. ...	4·50–4·70
Refined oil, exclusive of taxes, ex. refinery...	8·70
Residuals in tank waggons, at refinery ...	4·20–4·25
Paraffin	120–130
Prices for Export.	
Refined oil, f.o.b., per 100 kgs.	7·0–7·50
Benzine, sp. gr. 0·710–0·715, f.o.b.	17–18
„ sp. gr. 0·715–0·720 „	14·50–15·50
„ sp. gr. 0·730–0·740 „	10–11
„ sp. gr. 0·745–0.755 „	9–10
Lubricating, horticultural	32
„ prime	37
„ extra	42
„ Royal, "Steaua Romana" ...	46
Imperial "Aurora"	46
Vacuum-Ideal "Vega"	52

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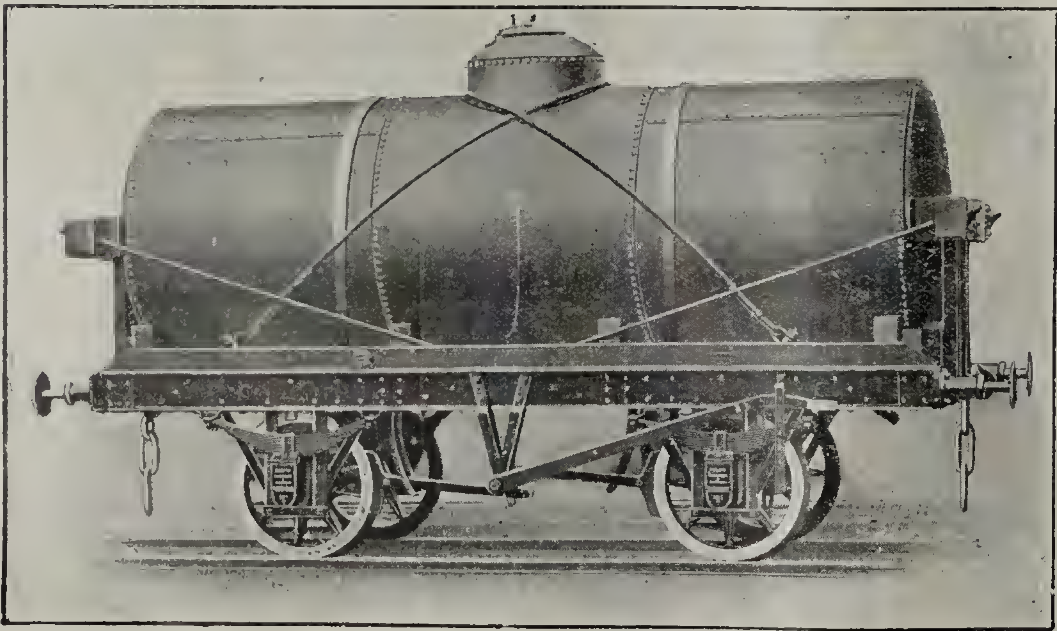
IMPORTS of PETROLEUM into UNITED KINGDOM

Specially prepared for this Journal by the Custom House.

FOR THE WEEK ENDED JUNE 7TH, 1909—

DATE.	PORT AND IMPORTERS.	DESCRIPTION.	NO. OF GALS.	PORT WHENCE.
June	LONDON—			
1	Page, Son and East ..	Lub. Oil and Gr.	880	Antwerp
1	J. Harrison, Ltd.	Lub. Gr.	480	,,
1	Van Dam and Co.	Tar. Oil	2,510	Rotterdam
1	Union Lighterage Co. ..	Lub.	4,500	Philadel.
1	Mordaunt Bros.	,,	11,000	,,
1	Bowring Petroleum Co. ..	,,	7,880	,,
1	Langley, Smith and Co. ..	,,	2,000	New York
1	Produce Brokers' Co. ..	,,	4,800	,,
1	Port of London Authority..	,,	12,000	,,
2	Fielder, Hickman and Co...	,,	17,160	,,
2	,, ...	Lub. Gr.	3,840	,,
2	Grindley and Co	Lub.	4,000	,,
2	Bowring Petroleum Co. (Joyo Maru)	Lamp	749,820	Philadel.
2	Anglo-American Oil Co. ..	Lub.	72,400	,,
2	Port of London Authority..	,,	3,400	Hamburg
2	British and Foreign Wharf	,,	1,380	Antwerp
2	Anglo-American Oil Co. ..	,,	8,000	Philadel.
2	Asiatic Petroleum Co. (Goldmouth)	Benzine	1,502,640	Pulo Samboe
3	Union Lighterage Co. ..	Lub.	29,250	Philadel.
3	R. Park and Co.	,,	600	Marseilles
3	Page, Son and East ..	,,	260	Antwerp
3	G. and H. Green	Lub. Gr.	830	New York
4	M. Record	Lub.	12,000	Trieste
4	British and Foreign Wharf .	,,	40	Antwerp
4	Schlieman's Oil Works ..	Lub. Oil and Gr.	4,450	Hamburg
5	Burrell and Son	Lub.	2,440	,,
5	J. Waldock	,,	1,500	,,
7	Page, Son and East.. ..	,,	120	Antwerp
7	Produce Brokers	,,	320	,,
7	J. Harrison	Lub. Gr.	130	,,
	LIVERPOOL—			
1	Van Oppen and Co... ..	Lub.	30	New York
1	W. H. Stott and Co. ..	,,	120	Hamburg
1	F. Leyland and Co... ..	,,	3,000	N. Orleans
1	C. C. Wakefield and Co. ..	Lub. Gr.	280	Antwerp
1	Crew, Levick and Co. ..	Lub.	390	Philadel.
1	C. W. Field and Co. ..	,,	210	Antwerp
1	W. Gibson and Sons ..	Lamp	3,080	Boston
1	E. H. Kellogg and Co. ..	Lub.	2,000	New York
2	Meade-King, Robinson & Co.	,,	20,800	Hamburg
2	G. B. Taylor..	,,	66,760	New York
2	A. E. Bennett and Co. ..	,,	80	Antwerp
3	W. B. Dick and Co. ..	,,	12,200	Philadel.
3	Crew, Levick and Co. ..	,,	7,190	,,
3	,, ..	M.Colza	5,150	,,
3	Liverpool Storage Co. ..	Lub. Gr.	4,800	,,
3	,, ...	Lub.	23,800	,,
3	Worthington and Boler ..	,,	1,600	Philadel.
3	Meade-King, Robinson & Co.	,,	19,440	,,
4	,, (Frisia)	Lamp	304,190	Rotterdam
4	Meade-King, Robinson & Co. (Tiflis)	Lub.	435,000	Batoum
4	,, ,,	L.Resid.	141,220	,,
7	R. Davidson and Co. ..	L.Comp.	450	Hamburg
7	Bramwell, Fern and Co. ..	Lub.	1,650	Philadel.
7	Valvoline Oil Co.	,,	15,580	New York
7	Pickford's, Ltd.	Lub. Oil and Paste	370	Hamburg
7	Midland Railway Co. ..	Lub.	850	Philadel.
	BRISTOL—			
1	J. and R. Bush	,,	31,800	New York
2	H. Pritchard and Co. ..	,,	4,200	,,
3	Anglo-Bosphorus Oil Co. ..	,,	4,810	,,
3	W. G. Clarke	,,	1,600	Antwerp
4	Pickford's, Ltd.	,,	480	,,
5	First Anglo-Russian Oil Co.	,,	250	Hamburg
5	Pickford's	Lub. Oil and Paste	560	,,
	GLOUCESTER—			
3	Bristol S. Navigation Co. ..	Lub.	760	,,
	GRIMSBY—			
3	J. Sutcliffe and Son	,,	80	,,
	BARROW—			
4	Anglo-American Oil Co. (Suwanee)	Lamp	265,960	New York
	HARWICH—			
1	D. Howard	Lub. Gr.	50	Antwerp
	HULL—			
1	T. Wilson, Sons and Co. ..	Lub.	53,600	New York
1	,, ..	,,	2,400	Trieste
2	Wilsons and N.E. Co. ..	,,	560	Hamburg
2	Hull & Netherlands S.S. Co.	,,	560	Rotterdam
5	W. Gilyott and Co... ..	,,	30,400	New York
	MANCHESTER—			
1	Liverpool Storage Co. ..	,,	16,860	,,
1	R. Tomlinson	,,	1,000	,,
1	G. B. Taylor	,,	73,400	,,
1	D. Currie and Co.	Lub. Gr.	640	Hamburg
1	,, ..	Lub.	480	,,
3	Worthington and Boler ..	,,	6,740	Philadel.
3	Bramwell, Fern and Co. ..	,,	25,200	,,
3	,, ...	Lamp	980	,,
3	J. T. Fletcher and Co. ..	Lub.	80	Antwerp
4	Pickfords	Lub. Oil and Paste	130	Hamburg
5	G. B. Taylor	Lub.	40,200	Philadel.
7	C. H. Morton and Sons ..	,,	1,600	,,
7	Meade-King, Robinson & Co.	,,	15,800	,,
	MIDDLESBRO'—			
7	J. J. Sutherland ..	Lub. Oil and Gr.	820	Antwerp
	SOUTHAMPTON—			
3	P. E. Curry	Lub.	300	New York



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Stronger work. Less solder required.

IMPORTS.—(*Concluded*).

Date.	Port and Importers.	Description.	No. of Galls.	Port Whence.
June				
	Plymouth—			
1	Bristol Steam Nav, Co.	Lub.	1,000	Antwerp
	Aberdeen—			
7	R. Connon, Reid and Co.	Lamp	1,200	Hamburg
	Dundee—			
3	D. Alexander and Sons	Lub.	2,800	,,
	Glasgow—			
2	Anchor Line	,,	35,400	New York
2	J. and A. Allan	Lamp	2,400	Philadel.
2	,,	Lub.	56,000	,,
3	Clyde Shipping Co.	,,	740	Antwerp
	Grangemouth—			
1	W. Graham-Yooll and Co.	Lamp	2,000	Hamburg
	Leith—			
1	G. Gibson and Co.	Lub.	7,950	Antwerp
1	,,	,,	80	,,
1	Henderson and McIntosh	,,	53,480	Philadel.
3	J. Currie and Co.	,,	1,100	Hamburg
	Belfast—			
3	J. C. Pinkerton and Co.	Lub. Oil and Paste	2,560	,,
4	G. Heyn and Sons	Lamp	1,050	Riga
	Deduct to correct—			
	Barrow—		4,280,930	
12/5	Anglo-American Oil Co. (Delaware)	Lamp	7,000	Philadel.
	Manchester—			
14/5	Anglo-American Oil Co. (Tioga)	Gas	24,020	,,
	Hull—			
21/5	T. Wilson, Sons and Co.	Lub.	39,640	New York
	Add to correct—			
	Barrow—		4,210,270	
4/6	Anglo-American Oil Co. (Suwanee)	Spirit	726,690	New York
	Hull—			
7/6	W. A. Massey and Co.	Petrol	120	Hamburg
	Southampton—			
7/6	Barringer and Son (Jayo Maru)	Lamp	263,240	Philadel.
	Total for the Week		5,200,320	

FOR THE WEEK ENDED 14TH JUNE, 1909—

Date.	Port and Importer.	Description.	No. of Galls.	Port Whence.
June	London—			
8	Produce Brokers' Co.	Lub.	8,000	Trieste
8	G. Jennings	,,	7,305	New York
8	Fielder, Hickman and Co.	,,	17,000	,,
8	Mordaunt Bros.	,,	4,900	,,
9	British and Foreign Wharf	,,	40	Antwerp
9	A. Brown and Co.	,,	4,800	Philadel.
9	Port of London Authority	,,	240	Hamburg
9	Anglo-American Oil Co. (Weehawken)	Naphtha	433,275	Kustendje
9	,, ,,	Benzine	601,410	,,
10	T. H. Lee	Lub.Gr.	970	Hamburg
10	J. Harrison	,,	1,040	Antwerp
10	Page, Son and East	Lub.	120	,,
10	,,	Lub. Gr.	400	,,
10	Langley, Smith and Co.	Lub.	2,800	New York
10	Port of London Authority	Lub Gr.	380	,,
10	W. B. Dick and Co.	Lub.	2,450	Philadel.
10	Worthington and Boler	,,	5,800	,,
10	Trinidad Lake Asp. Pav. Co.	,,	2,400	,,
10	White and Foxwell	,,	4,800	,,
10	Anglo-American Oil Co.	,,	38,000	,,
11	A. Brown and Co.	,,	2,000	Hamburg
11	W. B. Dick and Co.	,,	4,250	,,
11	Port of London Authority	,,	1,000	New York
11	Mercantile Lighting Co,	,,	7,000	,,
11	Anglo-American Oil Co. (Tamarac)	Gas	750,000	Baltimore
11	,, ,,	,,	922,660	,,
11	T. H. Lee	Lub.Gr..	170	Hamburg
12	Scott's Wharf	Lub.	5,000	New York
12	Page Son and East	,,	800	Antwerp
14	Port of London Authority	,,	6,200	New York
14	Page Son and East	,,	160	Antwerp
14	,,	Lub. Gr.	40	,,
14	Van Dam and Co.	Tar Oil	2,390	Rotterdam
14	J. Harrison	Lub.	250	Antwerp
	Liverpool—			
8	W. B. Dick and Co.	,,	26,450	New York
8	Vacuum Oil Co.	,,	13,480	,,
8	George B. Taylor	,,	6,840	,,
8	R. Davidson and Co.	L.Comp.	240	Antwerp
8	C. C. Wakefield	Lub. Gr.	300	,,
8	,,	Lub.	240	Genoa
10	R, Davidson	L.Comp.	400	Hamburg
11	Meade-King, Robinson & Co.	Lub.	5,200	Baltimore
11	,,	,,	7,800	,,
11	A. Hopps and Sons	,,	2,620	,,
11	Schlieman's Oil Works	,,	1,000	,,
11	Railton, Campbell & Crawford	,,	440	New York
14	Pickfords	Lub.	200	Antwerp
14	Burnaby and Chantrell	L.Comp.	780	New York
14	Valvoline Oil Co.	Lub.	19,070	,,
14	,,	Lub.Gr.	200	,,
	Bristol—			
9	J. Hare and Co.	Lub.	2,330	,,
9	H. R. James and Son	,,	1,600	,,
9	,,	,,	14,000	,,
9	Ford and Canning	,,	1,480	,,
9	,,	,,	600	,,
9	H. Pritchard and Co	Lamp	4,100	,,
10	J. and R. Bush	Lub.	32,000	,,
11	H. Matthews and Co.	,,	370	Hamburg
11	Pickford's	Lub. Oil and Paste	840	,,
11	Ford and Canning	Lub.	280	New York
12	,,	L.Resid.	5,100	Montreal
	Grimsby—			
8	J. Sutcliffe and Son	Lub.	2,140	Antwerp
10	,,	,,	260	,,
11	,,	,,	480	,,
12	,,	,,	490	Hamburg
	Hull—			
8	T. Wilson, Sons and Co.	,,	1,800	St.Petersbrg.
8	Wilsons and N.E. Co.	,,	240	Hamburg
8	,,	,,	120	Antwerp
8	T. Wilson, Sons and Co.	,,	7,360	New York
8	Wilsons and N.E. Co.	,,	2,280	Antwerp
10	T. Wilson, Sons and Co.	,,	200	Riga
10	Wilsons and N.E. Co.	,,	6,130	Hamburg
10	,,	,,	10,640	,,
3/6	,,	Nap.Crude	800	,,
10	,,	Lub.	1,000	,,
10	,,	,,	160	Antwerp
10	,,	,,	1,440	,,
14	,,	,,	480	,,
14	,,	,,	240	,,
	Manchester—			
8	Crew, Levick and Co.	,,	19,400	Philadel.
8	,,	M.Colza	1,230	,,
8	D. Currie and Co.	Lub.	960	Hamburg
8	,,	,,	480	,,
8	J. T. Fletcher and Co.	,,	480	Antwerp
10	D. Currie and Co.	,,	40	Hamburg
10	Crossley Bros., Ltd.	,,	50	Montreal
11	Lamport and Holt	,,	680	New York
12	W. Hodgson and Co.	,,	445	,,
12	,,	Lub. Gr.	725	,,
12	Diamond Lubricating Co.	Lub.	3,125	,,
12	George B. Taylor	,,	11,400	,,
12	,,	,,	164,160	,,
12	,,	,,	66,160	,,
14	D. Currie and Co.		110	Hamburg
	Middlesbro'—			
11	E. Harris and Co.		2,000	Antwerp
	Newcastle—			
10	Tyne-Tees S.S. Co.	,,	240	Hamburg
14	,,	,,	3,840	Antwerp
14	,,	,,	600	Hamburg
	Southampton—			
10	White Star Line	,,	1,200	New York
	Dundee—			
10	D. Alexander and Sons	,,	3,960	Hamburg
	Glasgow—			
8	Anchor Line	,,	28,060	New York
9	,,	,,	220	,,
10	Clyde Shipping Co.	Lub. Gr.	390	Antwerp
10	Donaldson Bros.	Lub.	2,600	Baltimore
14	Anchor Line	,,	22,180	New York
	Grangemouth—			
8	W. Graham-Yooll and Co.	Lamp	2,000	Hamburg
8	J. Currie and Co.	,,	2,400	,,
8	,,	Lub.	2,000	,,
14	W. Graham-Yooll and Co.	Lamp	2,000	,,
	Leith—			
7	G. Gibson and Co.	Lub.	640	Antwerp
10	J. Currie and Co.	,,	2,900	Hamburg
10	W. Graham-Yooll and Co.	Lamp	4,530	,,
	Belfast—			
14	G. Heyn and Sons	Lub.	420	Reval
	Liverpool—			
9	Crew, Levick and Co.	L.Resid.	8,240	Montreal
9	Geo. B. Taylor	Lub.	240	New York
9	J. Light and Son	,,	960	,,
9	Woollett, Airey and Co.	Lub. Gr.	120	,,
	Total for Week		3,383,455	
	Total for the Fortnight		8,583,775	
	Amendments—Deductions.			
	London—			
7/5	A. Vaughan	Lub.	190	Hamburg
	Hull—			
28/5	Thos. Wilson, Sons and Co.	,,	30,400	New York
	Manchester—			
20/5	Bramwell, Fern and Co.	,,	32,970	Philadel.
20/5	,,	,,	32,990	,,

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